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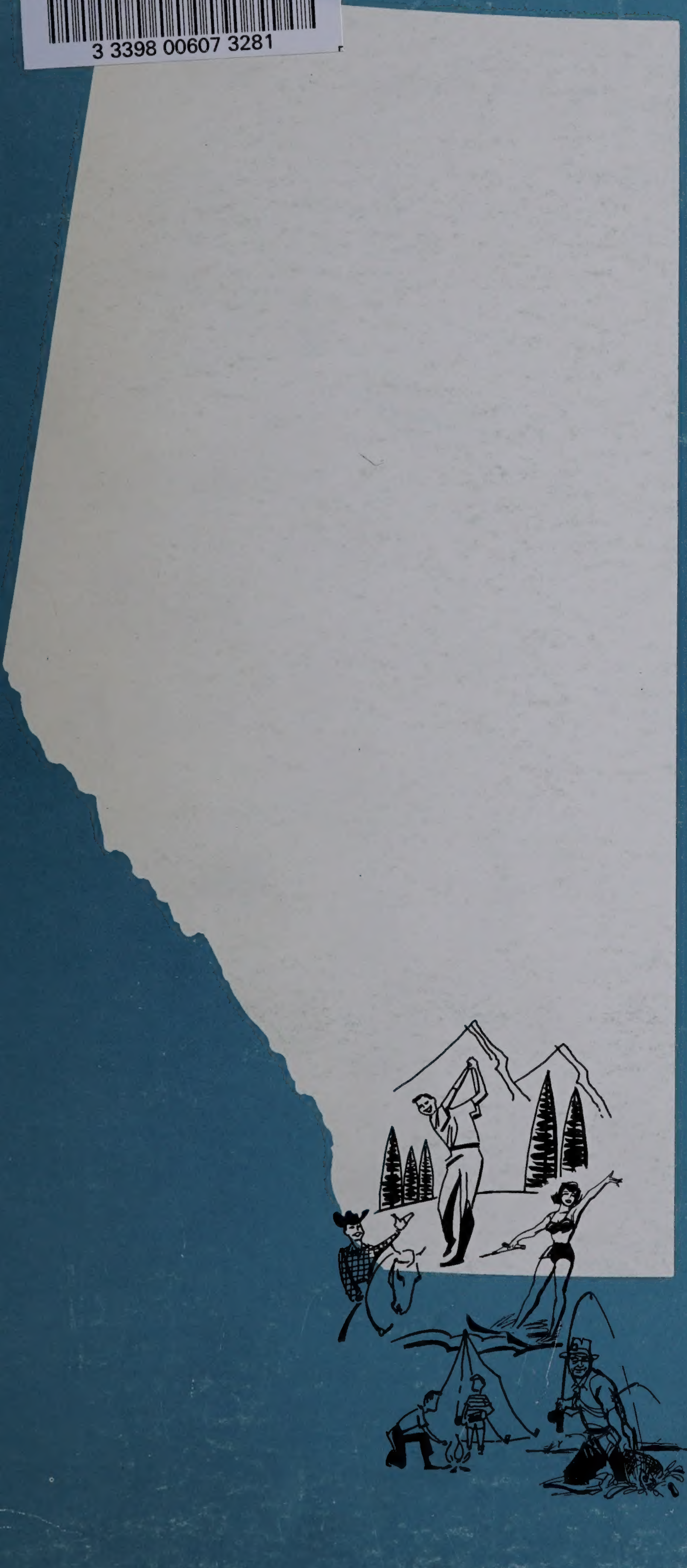

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CROWSNEST PASS
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development program and economic feasibility

Volume 2
Appendices

October 1967

APPENDIX B

DEVELOPMENT PROGRAMME AND ECONOMIC FEASIBILITY

1 - INTRODUCTION

There is an important difference between the projections for the summer and winter markets, made in Appendix A. The summer projection concerns total traffic through the Crowsnest Pass, between June 1 and September 30, while the winter market analysis produced a specific area ski attendance projection. Further calculations are necessary to refine the summer projection into specific attendance figures, and to develop a concept of the feasibility of the main recommendations made in Volume 1, Chapter 1, Site Analysis. The calculations will be based on exploitation of the summer market (or primary market) by the various developments, along with estimates of traffic generated.

The tremendous drawing power of the national parks eliminates the feasibility of developing facilities in the Pass which are in direct competition with the parks. But the heavy flow of tourists in Alberta provides an opportunity to create facilities and activities which are complementary. This would add to the variety of recreation facilities offered in the Alberta mountain region and could enhance tourism to this part of the province, rather than encourage a redistribution of tourist dollars.

2 - THE HISTORICAL COMPLEX

The main potential of the Crowsnest Pass is in the exploitation of its short but colourful history. An historical complex, as discussed in Chapter 1, would seem the most suitable method of achieving optimum market penetration with moderate investment in a concentrated area.

The public investment required is around $2.1 million. Probably, the amount will not be recuperated.
On the other hand, the annual operating expenditures would be covered fully by operating revenues. The initial public investment would have to be justified by the development's economic impact on the Crowsnest Pass's economy.

The elements of the historical complex would be:

(1) - The Frank Slide, covering the entire area of the slide;

(2) - An historical town (1900 era) on the site of the old Town of Frank.

(3) - A possible riding and walking trail up the Gold Creek to the old townsite of Lille.

2.1 - The Frank Slide

Total land area involved is about 1,540 acres.

About one-third of the land occupied by the slide is already in public ownership (part is under grazing lease). The remaining acreage can probably be assembled at a maximum cost of $200 per acre. Close to 25,000 feet of trails are projected for adequate development of the slide as a geological and historical exhibit. The cost

is about $0.70 per average foot. This estimate of cost per foot includes the cost of small footbridges, benches, etc. A larger footbridge across the Crowsnest River near the old main entrance is estimated to cost about $7,500. Redevelopment and refurbishing costs of the old mine entrance are estimated at $50,000. The historical and geological research relating to the slide development, and the construction and erection of signs and markers will cost another $10,000. The preparation of the slide, including removal of the garbage dumps and other foreign matter is estimated to cost $15,000. The total capital costs are expected to reach $300,000.

The annual operating expenditures, including maintenance and labour, will not likely exceed $6,000. The slide, as a component of the historical complex, will not produce an operating revenue.

TABLE 14

ESTIMATED CAPITAL EXPENDITURES FOR DEVELOPMENT OF THE FRANK SLIDE

	Dollars
Land Costs (acquisition)	200,000
Trails (walking and riding)	17,500
Footbridge	7,500
Restoration of Old Mine Entrance and Air Shaft	50,000
Preparation of Slide (i.e. removal of garbage dumps)	15,000
Historical and Geological Research, Markers and Signs	10,000
Total Capital Expenditures	300,000

2.2 - The Historical Town

Unlike other historical developments which recreated settlements of an agricultural character (i.e. Mactaquac Historical Village, N.B., and Upper Canada Village, Ontario), the settlement in the Pass should be a compact small town. The town which is visualized resembles the Town of Frank before the slide occurred (1903). The old town had a frontier appearance which mixed a western mining and pioneering atmosphere in a blend peculiar to the Pass area around 1900.

The old Town of Frank contained about 60 buildings. Dominion Avenue was its main street, with wooden sidewalks, a dirt road, hitching racks, and false fronted buildings. One street paralleled Dominion Avenue. There were four side streets.[1] The reconstructed town could contain up to 35 buildings grouped along Dominion Avenue and two or three short side streets. The total land area involved would be 46 acres. Eighteen acres are required for the town, another 18 acres for landscaping around the town, and 10 acres for parking. The parking lot could provide the parking requirements for the slide. The total land costs involved would be around $18,400 ($400 per acre). Site preparation for the town (including water, sewer and electricity servicing), parking lot, and landscaped area around the town involves about $71,000. Construction and reconstruction of about 30 buildings, boardwalks, hitching racks and street preparation, plus the acquisition of a number of antique cars, is expected to cost $1,369,000 (see Table 15 for details). Only two buildings are planned that are not part of the original town. The gate and administrative building, at the entrance of the town, houses the box offices, administration offices, and personnel quarters. It is estimated to cost $75,000. The second building is a museum/visitor centre in which all aspects of the history of the Pass and surrounding area are given detailed attention. The cost of the building, including the furnishings,[2] is estimated at $150,000. Both these buildings should be constructed in a style which harmonizes with the town's architecture and observes modern building codes.

The livery stable which rents horses to tourists should located between the gate and the town. In the town many or all of the commercial buildings and establishments should be open for business, including the Imperial and Frank hotels, The Palm restaurant, the Union Bank, the newspaper office of the Frank Sentinel, the Frank Dairy and Milk Bar and the blacksmith shop. Entertainment and activities catering to adults and children should be offered in the community hall at set times. More spectacular events such as bank hold-ups, could be staged as extra attractions. The Frank Slide should be accessible from the townsite. As a possible second phase, the construction of a miniature Frank and Grassy Mountain railway, on an elevated track around the town, might be considered. The estimated cost is approximately $100,000.

The construction time required to complete the historical town is about five years. Assuming that actual construction would begin in 1969, the first full operating season will be in 1974. The attendance calculations are calculated for that year.

TABLE 15

ESTIMATED CAPITAL EXPENDITURES FOR THE HISTORICAL TOWN

			Dollars
Land Costs (acquisition)			18,400
Site Preparation (including servicing, landscaping, parking lot)			71,000
Entrance, administration, personnel building			75,000
Museum/Visitor Centre	- building	$75,000	
	furnishings	75,000	150,000
Imperial Hotel	- building	$50,000	
	interior	25,000	75,000
Frank Hotel	- building	$25,000	
	interior	15,000	40,000
The Palm Restaurant	- building	$25,000	
	interior	15,000	40,000
Frank Dairy and Milk Bar	- building	$25,000	
	interior	15,000	40,000
Union Bank	- building	$20,000	
	interior	25,000	45,000
Drugstore	- building	$30,000	
	interior	15,000	45,000
General Store - Post Office	- building	$40,000	
	interior	20,000	60,000
Frank Sentinel printing shop	- building	$10,000	
	interior	20,000	30,000
Church	- building	$20,000	
	interior	8,000	28,000
		Sub Total	717,400

Table 10 Cont'd

		Sub Total	$717,400
Northwest Mounted Police Post -			30,000
Community Hall -			55,000
Alberta Mercantile Company Store -	building	$25,000	
	interior	$15,000	40,000
Blacksmith -			30,000
School -	building	$25,000	
	interior	$15,000	40,000
Livery Stable	building	$10,000	
	stock	$ 6,000	16,000
Other stores (shoe repairs, tailor shop, photoshop, antiques, souvenir and handicraft shop, ready-to-wear ladies clothing store, ready-to-wear men's clothing store, wines, brandies and whiskies store, watch repair, gift jewellery shop, cigar store) -	buildings	$100,000	
	interiors	100,000	200,000
Doctor's office, dentist's office			50,000
Residences (8 at $25,000 complete)			200,000
Boardwalks, hitching racks, street-preparation			60,000
Antique Motor Cars			20,000
			1,458,400
Research, Planning, contingencies 25%			364,600
		Total	$1,823,000

The source of the names of hotels, stores and other buildings, which were part of the old Town of Frank at the time of the slide, is The Frank Slide Story by Frank Anderson (Frontiers Unlimited, Calgary, Alberta).

2.3 - Attendance Estimates in the Historical Town

At present, there is very little recreational opportunity along Highway 3 between Pincher Creek and Fernie (about 80 miles), other than sightseeing or driving for pleasure. The historical complex containing the developed Frank Slide and historical town would be directly adjacent to the highway. It would be accessible and have a visual impact. An historical development in similar circumstances in Ontario (Upper Canada Village) attracts between two and three per cent of all traffic passing along Highways 2 and 401. The Mactaquac historical village (New Brunswick) is projected to attract a similar percentage of the traffic from the adjacent Trans-Canada Highway. The operating seasons of these developments are limited to the summer. The assumed operating season for the Crowsnest Pass historical complex is four months (June 1 to September 30).

If the two to three per cent penetration rate is valid for the Crowsnest historical complex, the 1974 attendance would be between 73,500 and 110,000.

Research carried out by T.A. Bostick in 1963[3] indicates that 7.2 per cent of all automobile trips are for vacation and recreational purposes. If this percentage could be applied to the traffic on the highways passing Upper Canada Village, Ontario, and the Mactaquac historical village, N.B., a penetration rate of all recreational traffic along these highways of about 33 per cent is achieved.

If the Crowsnest Pass historical complex could equal this performance during the 122-day summer operating season from June 1 to September 30, the total attendance would be 121,400 in 1974. That figure is based on mean projection. A penetration rate of 25 per cent is considered a reasonable working assumption. This would bring close to 93,000 people to the historical town and slide in 1974.[4]

A major recreation facility such as the historical complex, is capable of generating its own traffic. To calculate this traffic some of the findings of the Ontario Department of Highways Research Branch[5] are used. The attraction of the various resort areas in Ontario was studied in detail and parameters were developed for travel by cottagers, campers and commercial guests. To calculate the attraction, or drawing power, of other areas or developments, they are applied in a gravity formula.[6] Application of the formula with the Ontario parameters to the Crowsnest Pass may not result in an accurate prediction of future drawing power. At best, the procedure will provide us with an indication of the effect of the Crowsnest Pass historical complex on a number of markets.

The markets for which drawing power estimates were made are:

(1) - The 1974 out-of-province visitors to Alberta between June 1 and September 30, except those which are projected to travel through the Pass in that year. The latter are subject to a 25 per cent drawing power assumption;

(2) - The 1974 Alberta/British Columbia population living within a radius of 100 miles driving distance from the Pass;

(3) - The 1974 Alberta population, except those living within 100 miles driving distance.

Market 1 - Tourists to Alberta. Average distance assumption from the Pass: 200 miles. Capacity of the complex in 1974 estimated at 250,000 people per season. The total number of out-of-province visitors between June 1 and September 1 in 1974, according to the mean projection for Alberta (see Table 2, column 4, in Appendix A), is 2,290,880 (=64 per cent of total). Of these, about 26,000 would be attracted.

Market 2 - Population within 100 miles. Average distance assumption: 90 miles. Capacity of complex 250,000 people per season. Total Alberta population within 100 miles in 1974 - 89,650. Total British Columbia population within 100 miles in 1974 - 30,600. Total 120,250 people. Of these, about 30,000 would be attracted.

Market 3 - Alberta population. Average distance assumption: 250 miles. Capacity of complex 250,000 people per season. Total population 1,768,069. Of these about 16,300 would be attracted to the complex. Including the attraction of the historical complex on the above three markets, the total attendance in 1974 is estimated at about 165,300 persons. The adults to children ratio is expected to be 2:1, or 108,600 adults and 56,700 children.

2.4 - Operating Expenditures

The town's operating expenditures are expected to be between $300,000 and $400,000 in 1974. The labour component of the expenditures, includes a director or manager ($15,000 per year) and a permanent staff of about 10 persons (administration, work programming, craftsmen, etc., average annual salary $8,000) would be $95,000. In addition, about 15 seasonal employees will be required, probably for a period of four to six months, at an average of $6,135 per year, or about $38,400 per year. For the services of a restoration architect and engineer that will be required on an intermittent basis after completion of the project, another $12,000 is required. The total labour costs in 1974 will total about $145,400.

The entrance fees should cover the operating expenditures in full. The complex should be able to pay its own way when completed. An entrance fee of $2.50 for adults and $1.00 for children would raise $328,200 in 1974. A further $20,000 to $30,000 per year could be realized from commercial floor space rented to concessionaires.

2.5 - The Gold Creek Trail

A third element of the historical complex could be a trail leading up the canyon of the Gold Creek to the former site of the old Town of Lille. The trail would be a most attractive nature trail. It could be made suitable for walking as well as horseback riding. The former townsite is clearly recognizable by the remains of buildings. The area would be a suitable site for an authentic Indian summer camp or village.

About 20,000 feet of trail would have to be constructed, including a number of small footbridges, at an estimated cost of $14,000. The maintenance costs would be about $1,500 per year. The trail would be accessible from the historical town and Highway 3. Its operating expenditures could be part of the expenditures of the historical town.

2.6 - Economic Impact

The number of direct jobs created by the historical complex would include 11 full time and 15 part time jobs, or a total of 17.25 full time jobs with a total income of about $145,400. The figures cover the people employed by the development itself. In the historical town, the various restaurants and hotels will require service personnel and the shops and stores will require sales personnel on a seasonal basis (four months). It is expected that the manpower requirements by the concessionaires in 1974 will involve at least 40 seasonal employees (at an average rate of $6,135 per year) earning a total of $81,600 during the four summer months. The 40 seasonal jobs are equal to 13.3 full time jobs.

It is difficult to estimate the expenditures by visitors on meals, refreshments, services, goods and articles. The study by Kates, et al.[7] indicates that visitors to Alberta spend almost 18 per cent of their travel budget, or $1.26 per day per capita, on goods and services other than lodging, food and drink, transportation and recreation. By 1974 this amount may increase to $1.85. The historical town would provide a unique market place for this part of the tourist dollar. The Outdoor Recreation Resources Review Commission[8] demonstrated that the average travel day is eight hours long. Assuming that an average length of stay in the historical complex of two hours is a reasonable working assumption, at least 25 per cent of the visitor's travel day is spent inside the complex. On this basis, at least $55,000 could be expended on this category of goods and services offered in the town. The amount would very likely be much higher.

Almost every visitor will require a meal, either in the complex, or in a restaurant in the Pass area. The estimated average per capita expenditure per meal in 1974 is two dollars. The total expenditure is about $330,600.

Once the visitor is inside the complex, the opportunity to draw attention to other attractions and facilities in the Pass area and in the province must not be overlooked. The quality and authenticity of reconstruction and design of the complex will have a most important effect on the promotion of hotel/motel and other recreational facilities in the Pass area. The number of people staying overnight will depend on the historical complex. With an average length of stay of two hours, and an average travel day length of eight hours, it should be possible to induce 25 per cent of the visitors to stay overnight in the area. This ratio assumes an equal distribution of visitors over the day. The fieldwork carried out during the last week in June showed that two daily travel peaks seem to exist. One is in mid-morning and the other is in mid-afternoon. Effective penetration of the mid-afternoon peak could result in a propensity to stay overnight in the Pass which is higher than 25 per cent.

Of the 165,300 visitors expected in the historical complex in 1974, 30,000 are drawn from the area within 100 miles driving distance. These visitors are not likely to stay overnight. Of the remaining 135,300 visitors, 25 per cent are assumed to stay overnight in the Pass in 1974 (first complete operating season of historical complex). Involved would be a total of about 33,800 visitor/nights. Using the findings by J. W. Thorsell in his study of Waterton Lakes National Park,[9] 37.6 per cent of these visitors are potential hotel/motel guests, 55.6 per cent potential campers while 6.8 per cent use other accommodation.

2.7 - Hotel/Motel Guests

About 12,700 person/nights are projected for 1974 in hotel/motel type of accommodation. If the traffic pattern illustrated in Figure 8 is applicable in 1974, 12.4 per cent of person/nights can be expected in June, 41.3 per cent in July, 35.8 per cent in August, and 10.5 per cent in September:

June	1,575 person/nights
July	5,243 person/nights
August	4,547 person/nights
September	1,334 person/nights

The second highest month is August. It is used as design peak for calculating the number of hotel/motel rooms required to accommodate these person/nights. The assumed average room occupancy is 2.25 persons.

About 35 per cent of all travel to Waterton Lakes National Park takes place on weekends.[10] Attendance data of the Queen Victoria Park area near the Horseshoe Falls in Niagara Falls, Ontario, show a similar peaking of recreational traffic on weekends.[11] The average number of weekend days in August is 9.5. The number of

hotel/motel rooms required to accommodate the August 1974 weekend demand is calculated as follows:

$$\frac{(4{,}547 \times 35/100)}{9.5} : 2.25 = 74.5 \text{ rooms}$$

This number of rooms is required on August weekends to take care of overnight stays generated by the historical complex only. On weekends in July congestion caused by a shortage of rooms would occur.

About 65 per cent of all traffic takes place on weekdays. The average number of weekdays in August is 21.5. Assuming the same average room occupancy figures, the weekday room requirement is: $\frac{(4{,}547 \times 65/100)}{21.5} : 2.25 = 61$ rooms.

If 74.5 rooms were provided (second design peak) the occupancy of these rooms would be 100 per cent on August weekends, 100 per cent on July weekends, 80 per cent on August weekdays, and about 95 per cent on July weekdays. The occupancy levels in June and September would be much lower.

The above room requirement calculation is based on an average length of stay of one night. If the average length of stay in the Pass area could be increased to the level experienced elsewhere in southwest Alberta (1.68 nights),[12] the August weekend room requirement would be 125 rooms and the weekday demand would be 102.5 rooms.

2.8 - Campers

About 18,000 camper/nights are projected for 1974 for camping sites in the Crowsnest Pass. Their monthly distribution, on the basis of the sources used for our calculations, would be the same as for the hotel/motel guests:

June	(12.4 per cent)	2,331 camper/nights
July	(41.3 per cent)	7,763 camper/nights
August	(35.8 per cent)	6,731 camper/nights
September	(10.5 per cent)	1,975 camper/nights

August also presents the second highest peak. Thirty-five per cent of all traffic is also measured on weekends. The average number of persons per camping party is 3.6. The number of sites required for August weekends is as follows:

$$\frac{(6,731 \times 35/100)}{9.5} : 3.6 = 68.7 \text{ sites.}$$

On August weekdays the site demand will be

$$\frac{(6,731 \times 65/100)}{21.5} : 36 = 57.8 \text{ sites.}$$

These are the site requirements if the average length of stay is one night. If the average length of stay could be increased to the average length of stay in Waterton Lakes National Park (2.42 nights), the site demand on August weekends would be 166.3, and on August weekdays 139.2 campsites.

The campsites would be required to accommodate the demand from the historical complex only. The occupancy on August weekends would be 100 per cent, on July weekends 100 per cent, 80 per cent on August weekdays, and about 95 per cent on July weekdays. The occupancies in June and September will be much below these levels.

2.9 - Present and New Demand for Hotel/Motel Rooms

The existing (1967) hotel/motel accommodation in the Crowsnest Pass that is capable of catering to the tourist trade, numbers 70 rooms. About 45 of these rooms are open all year.

The average occupancy of all units in July and August is about 75 per cent; the occupancy in June and September is around 60 per cent in the year-round open rooms, and about 20 per cent in the summer-only rooms.

The number of room/nights offered between June 1 and September 31 = 8,540 (including all 70 rooms). A total of 10,935 room/nights are offered during the rest of the year in the 45 year-round open units. Present demand is 6,405 room/nights during the summer season (75 per cent, and 4,374 room/nights during the rest of the year (40 per cent). The 40 per cent occupancy figure generated by other than tourist business during the off-season months, seems to maintain itself at approximately the same level during the peak tourist months. Therefore, the 75 per cent occupancy figures during July and August include only 35 per cent occupancy generated by the tourist business.

In the following tabulation, the demand for hotel/motel room/nights generated by other than tourist demand is projected to grow at an average annual growth rate of 5 per cent:

TABLE 16

DEMAND FOR HOTEL/MOTEL ROOMS BY BUSINESS TRAFFIC, 1967-1976

Year	June 1 - Sept. 31 Demand*		Off-Season Demand*	
1967	2,196	Room/nights	4,374	Room/nights
1968	2,306	"	4,593	"
1969	2,421	"	4,823	"
1970	2,542	"	5,064	"
1971	2,669	"	5,317	"
1972	2,802	"	5,583	"
1973	2,942	"	5,862	"
1974	3,089	"	6,155	"
1975	3,243	"	6,463	"
1976	3,405	"	6,786	"

* present demand projected

The 5 per cent average annual growth rate was selected to reflect the increase in business activity in the Pass area over the next 10 years.

The tourist trade now brings the total average occupancy of the year-round open rooms to about 75 per cent during July and August. During June and September the total average occupancies are 60 per cent for the year-round open rooms, and 20 per cent for the summer-only rooms. This trade is projected to grow at an average annual rate of 8.3 per cent. The 1967 total summer demand is 5,115 room/nights. The other than tourist demand, calculated in the above is 2,196 room/nights, so that 1967 summer tourist demand has been about 2,919 room/nights.

TABLE 17

DEMAND* FOR HOTEL/MOTEL ROOMS BY TOURISTS, 1967-1976

Year	June 1-September 30	
1967	2,919	room/nights
1968	3,161	"
1969	3,423	"
1970	3,707	"
1971	4,015	"
1972	4,348	"
1973	4,709	"
1974	5,100	"
1975	5,523	"
1976	5,981	"

* present demand projected

The total demand in the 1974 summer season (3,089 + 5,100) is 8,189 room/nights. At an average room occupancy of 2.25 persons, this demand would involve 18,425 person/nights.

The total summer season demand, including tourists and non-tourists, between 1967 and 1976 is as follows:

TABLE 18

DEMAND* FOR HOTEL/MOTEL ROOMS, 1967-1976

Year	Total June 1 - September 30		August Weekend Room Demand
1967	5,115	room/nights	67
1968	5,467	"	72
1969	5,844	"	77
1970	6,249	"	82
1971	6,684	"	88
1972	7,150	"	94
1973	7,651	"	101
1974	8,189	"	108
1975	8,766	"	115
1976	9,386	"	124

* present demand projected

As demonstrated 12.4 per cent of this traffic arrives in June, 41.3 per cent in July, 35.8 per cent in August, and 10.5 per cent in September. The August weekend room demand has been computed in the above table. On August weekends the 70 hotel/motel units included in the analysis, are already close to capacity in 1967. In July, a shortage of rooms could probably be measured. By 1968, the present supply of rooms will not be adequate to cope with the August weekend demand. By 1974 an extra 38 rooms will be required to accommodate the growth in the total summer traffic. The average length of stay of the average overnight visitor at present is one night. If this length of stay increased to the southwest Alberta average (1.68 nights) under the influence of the development of the historical complex and other attractions, the room requirement in 1974 may be as high as 181.4 on August weekends.

The total second peak weekend hotel/motel room requirements are summarized in the following table. They include the demand based on the projection of present usage, and the demand created by generated traffic. Two average length of stay assumptions are made.

TABLE 19

TOTAL DEMAND FOR HOTEL/MOTEL ROOMS DURING AUGUST WEEKENDS, 1967-1976

Year	(1) Average Length of stay 1 night	(2) Average Length of Stay Increasing to 1.68 nights	(3) Mean (1+2): 2
1967	67	67	67
1968	72	78	75
1969	77	91	84
1970	86	110	98
1971	97	134	115
1972	112	166	139
1973	138	218	178
1974	183	307	245
1975	196	329	262
1976	211	354	282

The mean projection is used for further assessment of economic impact. Provision of the number of units indicated for each year yields the following average occupancy figures:

August weekends (design peak)	100 per cent
August weekdays	80 per cent
July weekends (congestion)	100 per cent
July weekdays	95 per cent
June weekends	30 per cent
June weekdays	22 per cent
September weekends	25 per cent
September weekdays	17 per cent

Assuming that two-thirds of the rooms would be open all year round, and one-third seasonally, the average room occupancy in the year-round units would, during the remaining eight months, drop to about 20 per cent (average party size 1) by 1976.

If the present travel pattern (see Figure 8) persists in the near future, the hotel and motel establishments may have financial difficulties. It is particularly important that the occupancy figures for the months of June and September develop better averages. Also, for year-round open rooms, an increase in average occupancy of at least 20 per cent is mandatory. Only then will the industry operate on a sound economic basis. The historical complex could play a very important role in lengthening the travel season through special exhibits in June and September. The construction of a heated mineral swimming pool near the present sulphur spring would also boost travel during these months. Hunting promotion could have a considerable effect on average occupancies in November and December. Finally, the possibility of ski development could make the year-round hotels/motels very profitable.

2.10 - Employment Created by New Hotel/Motel Facilities

Not all of the hotel/motel rooms required in the near future are the result of the development of the historical complex. To simplify the calculations it is assumed that all new room requirements from 1971 on, are part of the economic impact of the complex. The calculations are made for 1974, the expected first year of full operation of the complex.

The employment inside the complex in 1974, is equated to 30.5 full time jobs, earning $227,000. About 175 new hotel/motel rooms will be required by 1974. The hotel/motel ratio will probably be close to 1:2, or about 60 hotel rooms and 115 motel rooms. One employee per 2 hotel rooms is required during the peak months of July and August and one employee for every 4 hotel rooms during the rest of the year. One employee is required for every 4 motel rooms during July and August, and one employee for every 8 motel rooms in the rest of the year. All hotel rooms are open year round. About 60 of the new motel rooms are closed in the winter.

During July and August, sixty employees would be required in the hotels (30) and motels (30). During June and September thirty employees would be required.

During the off-season, about 22.5 employees will be required. These figures equate to a total of about 29 full time jobs, including the owners or managers of the various establishments.

The total 1974 earnings by these employees are estimated at $200,000.

The employment and earnings between 1971 and 1976 expressed in full time jobs, are as follows:

TABLE 20

TOTAL EMPLOYMENT CREATED BY ECONOMIC IMPACT OF HISTORICAL COMPLEX, 1971-1976

	Historical Complex		Hotels/Motels		Total	Total Earnings
Year	Jobs	Earnings	Jobs	Earnings	Jobs	
1971	10	$ 62,780	9	$ 52,400	19	115,180
1972	15	99,120	14	82,900	29	182,020
1973	20	139,120	20	122,000	40	261,120
1974	31	227,000	29	200,000	60	427,000
1975	31	238,350	31	210,600	62	448,950
1976	31	250,260	35	248,100	66	498,360

2.11 - Pro Forma Statements of a Forty Room Motor Hotel

Tables 11, 12 , 13 and 14 include a detailed account of the operating expenditures and revenues expected for a new year-round hotel operation (40 rooms) in the Crowsnest Pass. It can be concluded from Table 14 that the construction of a new facility of this nature will not become economically feasible until 1972. The rapid increase in revenues after 1973 indicate that expansion to 60 rooms will be justified within the forecast period.

TABLE 21

ESTIMATED CAPITAL EXPENDITURES

40 Room Motor Hotel - Year-round Operation (Assumed Completion date January 1, 1970)

Estimated Capital Cost (at unit cost per room of $8,000)	$ 320,000
65 per cent outside financing at 8 per cent	208,000
Equity	$ 112,000
Average Annual Payments (assuming amortization period of 20 years)	19,136

TABLE 22

ESTIMATED LABOUR EXPENSES (40 ROOM MOTOR HOTEL), 1970-1976
(Assuming no ski development on Bluff Mountain)

	1970	1971	1972	1973	1974	1975	1976
Manager	$ 9,500	$10,000	$10,500	$11,000	$11,500	$12,000	$12,500
Full Time Staff (No.)	10	10	10	10	10	10	10
Average Annual Rate	$ 5,040	5,300	5,565	5,840	6,135	6,440	6,760
Wages Paid	50,400	53,000	55,650	58,400	61,350	64,400	67,600
Seasonal Staff (No.)	10	10	10	10	10	10	10
Average Annual Rate	$ 5,040	5,300	5,565	5,840	6,135	6,440	6,760
Wages Paid (2 months)	$ 8,400	8,833	9,275	9,733	10,225	10,733	11,266
Total	$ 68,300	71,833	75,425	79,133	83,075	87,133	91,366
Plus 20 per cent (Employee Benefits)	$ 13,660	14,366	15,085	15,826	16,615	17,426	18,273
Total Labour Expenses	$81,960	86,199	89,510	94,959	99,690	104,559	109,639

TABLE 23

ESTIMATED OPERATING EXPENSES (40 ROOM MOTOR HOTEL), 1970-1976
(Assuming no ski development on Bluff Mountain)

	1970	1971	1972	1973	1974	1975	1976
Advertising (1)	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200	$ 3,200
Payroll and Benefits	81,960	86,199	89,510	94,959	99,690	104,559	109,639
Insurance (2)	1,600	1,600	1,600	1,600	1,600	1,600	1,600
Repairs, Maintenance	3,200	3,200	3,200	3,200	3,200	3,200	3,200
Utilities (4)	3,419	3,770	4,149	4,561	5,007	5,233	5,444
Legal, Accounting Fees (5)	1,140	1,256	1,383	1,520	1,669	1,744	1,814
Office Supplies (5)	1,140	1,256	1,383	1,520	1,669	1,744	1,814
Property Tax	6,400	6,400	6,400	6,400	6,400	6,400	6,400
Contingencies	3,200	3,200	3,200	3,200	3,200	3,200	3,200
	$105,259	110,081	114,025	120,160	125,635	130,889	136,311

(1) 1 per cent of investment
(2) 0.5 per cent of investment
(3) 1 per cent of investment
(4) heating, water, power, etc. - 3 per cent of receipts
(5) 1 per cent of receipts

TABLE 24

ESTIMATED OPERATING REVENUES AND EXPENSES (40 ROOM MOTOR HOTEL), 1970-1976
(Assuming no ski development on Bluff Mountain)

	1970	1971	1972	1973	1974	1975	1976
Receipts:							
Average Charge per Room/night	$ 12.50	$ 13.00	$ 13.50	$ 14.00	$ 14.50	$ 15.00	$ 15.50
No. of Room/nights	5,880	6,233	6,607	7,003	7,423	7,500	7,550
Room Revenues	73,500	81,029	89,195	98,042	107,634	112,500	117,025
Meals, Refreshments *	40,478	44,624	49,121	53,994	59,277	61,955	64,447
Total Revenues	113,978	125,653	138,316	152,036	166,911	174,455	181,472
Operating Expenses	105,259	110,081	114,025	120,160	125,635	130,889	136,311
Operating Profit	8,719	15,572	24,291	31,876	41,276	43,575	45,161
Less: Annual Payments (Principal + Interest)	19,136	19,136	19,136	19,136	19,136	19,136	19,136
Less: Reserve for Depreciation on Equity Portion	5,600	5,600	5,600	5,600	5,600	5,600	5,600
Profit (or Loss) before income tax	(16,017)	(9,164)	(445)	7,140	16,540	18,839	20,425
Percentage Profit (or Loss) on Equity	(14.3)	(8.1)	(0.4)	6.3	14.7	16.8	18.2

* 40 per cent of income from meals and refreshments. Ratio meals etc/lodging based on Kates, et al., *op. cit.*, Vol. 2, Appendix F, Table 39.

2.12 - Tourist Expenditures

The total expenditures of summer tourists who stay overnight in the Pass are difficult to estimate. About $330,600 is expected to be spent inside the historical complex on food and drink, and about $55,000 on goods and services other than lodging, food and drink, transportation, and recreation and entertainment. About 25 per cent of the visitors to the historical area are expected to stay overnight, involving 33,800 person/nights. Many of these visitors will make use of the hotel/motel and camping facilities in the east end of the Pass, others will stay overnight in the summer recreation complex projected in the west end of the Crowsnest Pass. About 60 of the 175 new rooms required by 1974 are projected as part of the summer recreation complex, and 140 of the new campsites. For these, a separate economic impact calculation will be made.

About 115 new hotel/motel rooms and 50 new campsites are projected for the east end of the Pass area for 1974. The average rate per room is set at $14.50 per night. Based on the occupancy calculations for the various months of the summer season,[13] the room revenues will be around $116,000.

The camping fee per night is set at $3.50 for 1974. The revenue for the 50 new sites in that year will be about $12,200. Total revenue from the 115 hotel/motel rooms and the 50 camping sites: $128,200.

In the non-resident travel study it was found that about 20.7 per cent of the tourist's budget is spent on lodging, the remaining 79.3 per cent on: groceries, meals and refreshments (28.5 per cent); transportation (22.4 per cent); recreation and entertainment (10.6 per cent); and other goods and services (17.8 per cent). If these figures would be applicable to the Crowsnest Pass, an additional $176,506 would be spent by tourists on

groceries, meals and refreshments. The transportation expenditures found by Kates, et al.[14] refer to measurements for travel through the Province of Alberta as a whole. In a specific location or small area, only part of the amount may be spent. Estimates for the Pass: $13,872 (10 per cent). The expenditures on recreation and entertainment, and other goods and services in addition to amounts spent in the historical complex, will probably not exceed $50,000. The total expenditure estimated by summer tourists staying overnight in the eastern part of the Crowsnest Pass, including the amounts spent in the historical village, is $754,900.

2.13 - Camping

Because of a lack of data, a similar analysis of present camping requirements is difficult. There are about 100 developed sites in the Pass, 50 in Lost Lemon Park and about 50 in the various provincial camping areas. Assuming that these sites cater to the 1967 demand, the number of sites required to accommodate the growth in tourist traffic through the Pass (average annual growth rate 8.3 per cent) is as follows:

1967	100	campsites
1968	108	"
1969	117	"
1970	126	"
1971	136	"
1972	147	"
1973	159	"
1974	172	"
1975	186	"
1976	201	"

The extra sites required as a result of the historical complex would add between 68 and 166 sites to this (mean = 116) by 1974. If the mean figure is used for further

calculations, a total of 288 sites will be required by 1974. Lost Lemon Park will be able to expand its capacity to 100 sites. Another 140 new sites are required by 1974. At 4 campsites per acre, about 35 acres needs to be set aside. The average development cost per site is estimated at $800, the total cost involved (including land cost) will be $112,000 in 1974.

Apart from the expansion opportunity available to Lost Lemon Park, there is no suitable space for the development of high quality camping areas near the present urban centres in the eastern part of the Pass. The new sites could be part of a larger summer recreation development projected in the scenic western part of the Crowsnest Pass. This development would integrate overnight accommodation of two kinds with a variety of outdoor recreation facilities and activities.

3 - SUMMER RECREATION COMPLEX

From a planning point of view, it is desirable to locate many or all of the hotel/motel rooms that are open all year, in or near the present urban areas. The activity generated by these establishments will enhance the general activity of the urban centres and contribute to community formation. The establishments would also be concentrated in one part of the Pass area for maximum impact on the traveller along Highway 3. The urban renewal study, projected for the communities in the Pass, will provide an excellent opportunity to plan for the location of new hotels and motels in relation to existing or new communities and facilities. Spreading of highway commercial development through the Pass should be avoided.

An important part, if not all, of the new seasonal hotel/motel development should be located outside the urban areas. It should relate to other seasonal activities, like camping, boating, golf, mountaineering, hiking, horseback riding, outdoor sports, etc.

Such development could form a natural overflow of the higher density area in the eastern part of the Pass, and create its own drawing power. It would be summer based, with high occupancies during the months of July and August in fixed accommodation and campsites. It would attract people unable to find accommodation in the eastern part of the Pass, as well as those that prefer activity based summer recreation. Occupancy problems might be expected in the months of June and September if the traffic pattern illustrated in Figure 8 persists in the future.

The elements of the summer recreation complex would be: chalet type accommodation, camping sites, possibly summer cottages, a swimming pool, an outdoor sports area including tennis courts, badminton courts, horseshoe pits, shuffle boards and possibly lawn bowling, a boating deck

(floating) and boat launch, a raft lagoon, a riding stable and stock, an archery and skeet range, a golf course (18 holes), a restaurant, and a small commercial development containing 2 or 3 stores. The acreage involved in the complex is about 300, including 130 acres for an 18-hole golf course. The railway right of way, traversing the selected area, will occupy 34 acres.

3.1 - Attendance Estimates in the Summer Recreation Complex

About 60 new seasonal hotel/motel type rooms will be required to accommodate the August weekend peaks in 1974. The most suitable location of the rooms is in Allison Creek Basin near Crowsnest Lake. In that area, a chalet type of facility would relate to activities like boating, raft riding on the Crowsnest River, golfing, etc. It would be close to campsites projected there, and be readily accessible from Highway 3. In addition, it would be close to the potential cottage development along the wind-free shores of Crowsnest Lake. The complete complex, including chalet, camping and recreational activities would be best developed by one owner. Its economic base would be the drawing power of the historical complex in the eastern part of the Pass.

The 140 new camping sites required by 1974, that cannot be accommodated in the eastern end of the Pass area are planned as part of the summer recreation complex. The area next to the golf course, offers attractive terrain and is sheltered from the western wind. A second area (located next to the small lake formed by the Crowsnest River inside the extended forest reserve) might be suitable for camping development at a later date. The 140 sites figure is based on the market analysis for the historical complex. As part of the summer recreation complex, it will help to support the golf course and other outdoor activities planned, and enhance its drawing power.

The capacity of the chalet, in number of person/nights in the four month summer season in 1974 would be 16,500 (122 x 60 x 2.25), the capacity of the camping sites 61,488 person/nights (122 x 140 x 3.6), total capacity about 78,000 person/nights. Application of the formula used for the calculations of the drawing power of the historical complex (see page B-9) on the three markets defined on pages B-9 and B-10, yields the following estimates of generated traffic:

Market 1 -	Tourists to Alberta	8227 person/nights
Market 2 -	Population within 100 miles	9600 person/nights
Market 3 -	Alberta Population	5080 person/nights

Total generated drawing power is 22,907 person/nights. Of these, 37.5 per cent or 8,590 will require chalet accommodation, and about 12,740 campsites. The rest (6.8 per cent) would use "other" accommodation.

The chalet guests generated in 1974, would arrive as follows:

June	12.4 per cent	1065	person/nights
July	41.3 per cent	3548	person/nights
August	35.8 per cent	3075	person/nights
September	10.5 per cent	902	person/nights

Consistent with the figures found earlier, August represents the second peak used for design purposes. Thirty-five per cent of the traffic takes place on weekends (1076 person/nights). The average number of weekend days in August is 9.5, bringing generated demand for chalet rooms to 50 (at average occupancy of 2.25 persons). This indicates the feasibility of at least 100 chalet rooms in the summer of 1974.

Similar analysis for camping site requirements shows that about 50 extra sites can be justified.

3.2 - Pro Forma Statements

The investment in the complex by 1974 would total $1,320,000. This includes a 100-room chalet, 200 camping sites, an 18-hole golf course, a restaurant, 2 stores, a swimming pool, an outdoor sports area, a boating dock and launch, a raft lagoon, and an archery/skeet range. A detailed breakdown of the estimated capital expenditures, operating expenditures and revenues is included in Tables 25 to 29.

3.3 - Summer Residences

Summer cottage development along the wind-free shores of Crowsnest Lake has been attempted a number of times. The attempts have not succeeded because the Lake is not suitable for swimming and water skiing. The creation of a variety of outdoor recreation facilities in the summer complex would make development of the lakeshore for cottages more attractive. A total of 80 lots, with a lake frontage of 50 feet each, would be feasible. Lot development costs would average about $700 per lot. The price per cottage may be in the $4,000 to $5,000 area.

3.4 - Economic Impact - Employment Created

An average of one employee would be required for every four rooms in the chalet during the months of July and August, for a total of twenty-five. During June and September an average of one employee would be required for every eight rooms for a total of twelve. The seasonal jobs are the equivalent of seven full time jobs, earning a total of $43,300 in 1974.

TABLE 25

ESTIMATED CAPITAL EXPENDITURES, SUMMER RECREATION COMPLEX
(Assumed Completion Date June 1, 1972)

		Dollars
100-Room Chalet (at unit cost per room of $4,000)		400,000
200 Camping Sites (at $800 per site)		160,000
Recreation Facilities		
Swimming Pool	$ 75,000	
18-hole Golf Course	$400,000	
Outdoor Sports Area including Tennis Court, Badminton Court, Horseshoe Pits, Shuffle-Boards, etc.	30,000	
Boating Dock (floating) and Launch	8,000	
Raft Lagoon	5,000	
Riding Stable and Stock	10,000	
Archery/Skeet Range	12,000	540,000
Restaurant		40,000
Commercial Development (2 or 3 stores)		30,000
Organizational Expenses and Working Capital		100,000
Planning and Design		50,000
Total Capital Costs		1,320,000
65 per cent outside financing at 8 per cent		858,000
Equity		462,000
Average Annual Payment (Principal + Interest) over 20 years		79,436

TABLE 26

ESTIMATED LABOUR EXPENSES, SUMMER RECREATION COMPLEX, 1972-1976

	1972 Dollars	1973 Dollars	1974 Dollars	1975 Dollars	1976 Dollars
Manager (6 months)	$ 5,500	6,000	6,500	7,000	7,500
Summer Employment					
Expressed in Full Time Jobs (no.)	14.3	14.3	14.3	14.3	14.3
Average Annual Rate	5,565	5,840	6,135	6,440	6,760
Wages Paid	$79,579	83,512	87,730	92,092	96,668
Total	$ 85,079	89,512	94,230	99,092	104,168
Plus 20 per cent (Employee Benefits)	17,015	17,902	18,846	19,818	20,833
Total Labour Expenses	$102,094	107,414	113,076	118,910	125,001

TABLE 27

ESTIMATED OPERATING EXPENSES, SUMMER RECREATION COMPLEX 1972-1976

	1972 Dollars	1973 Dollars	1974 Dollars	1975 Dollars	1976 Dollars
Advertising (1)	33,000	33,000	33,000	33,000	33,000
Payroll & Benefits	102,094	107,414	113,076	118,910	125,001
Insurance (2)	6,600	6,600	6,600	6,600	6,600
Repairs and Maintenance (3)	19,800	19,800	19,800	33,000	33,000
Utilities (4)	8,007	8,949	9,990	11,496	12,678
Legal and Accounting Fees (5)	2,669	2,983	3,330	3,832	4,226
Office Supplies and Expenses (5)	2,669	2,983	3,330	3,832	4,226
Property Tax	20,000	20,000	20,000	20,000	20,000
Contingencies	10,000	12,000	14,000	16,000	18,000
Total Expenses	204,839	213,729	223,126	246,670	256,731

(1) 2.5 per cent of investment
(2) 0.5 per cent of investment
(3) 1.5 per cent of investment for first 3 years,
2.5 per cent for following years
(4) heating, water, power, etc. - 3 per cent of receipts
(5) 1 per cent of receipts

TABLE 28

ESTIMATED OPERATING REVENUES, SUMMER RECREATION COMPLEX, 1972-1976

	1972 Dollars	1973 Dollars	1974 Dollars	1975 Dollars	1976 Dollars
Average Charge per Room/night	15.00	15.50	16.00	16.50	17.00
No. of Room/nights	6,500	7,100	7,750*	8,390	9,080
Room Revenues	97,500	110,050	124,000	138,435	154,360
Average Charge per Campsite/night	3.50	3.50	3.50	4.00	4.00
No. of Campsite nights	11,760	12,830	14,000	15,160	16,300
Campsite Revenues	41,160	44,905	49,000	60,640	65,200
Meals, groceries and refreshments**	57,272	64,002	71,455	82,226	90,687
Recreation and Entertainment	71,000	79,348	88,589	101,941	112,431
Total Revenues	$266,932	298,305	333,044	383,242	422,678

* Occupancy as indicated on page B-20.

** Thirty per cent of income on meals, groceries and refreshments.

TABLE 29

ESTIMATED OPERATING REVENUES AND EXPENSES 1972-1976

	1972 Dollars	1973 Dollars	1974 Dollars	1975 Dollars	1976 Dollars
Total Revenues	266,932	298,305	333,044	383,242	422,678
Total Expenses	204,839	213,729	223,126	246,670	256,731
Operating Profit	62,093	84,576	109,918	136,572	165,947
Less: Annual Payment (Principal + Interest)	79,436	79,436	79,436	79,436	79,436
Less: Reserve for Depreciation on Equity Portion	23,100	23,100	23,100	23,100	23,100
Profit (or Loss) before Income Tax	(40,443)	(17,960)	7,382	34,036	63,411
Percentage Profit (or Loss) on Equity	(8.7)	(3.8)	1.5	7.3	13.7

The camping area would require an average of six employees in June and September, and eight during July and August, for a total of two full time jobs, earning a total of $12,270 in 1974.

The golf course would probably require an average staff of six to eight during the entire season (four months) or 2.3 full time jobs, earning $14,110 in 1974. The restaurant would require eight employees during the summer season or 2.7 full time jobs for an annual income of $15,560. It could be a year-round business (if it could develop the highway traveller market in the off-season). The two stores projected adjacent to the restaurant would probably require two employees each during the summer season, equivalent to about 1.3 full time jobs earning about $7,975 in 1976.

The total number of full time jobs created by the summer recreation complex in 1974 is 14.3 and the total earnings would be $94,230.

3.5 - Economic Impact - Tourist Expenditures

The expenditures by visitors on lodging (chalet and camping, see Table 28) is $173,000. According to the findings of the non-resident travel study[15] this represents an average of 20.7 of the visitor's budget. About 28.5 per cent of the visitor's budget is spent on meals, groceries and refreshments ($238,190); 10.6 per cent on entertainment and recreation ($88,590); 17.8 per cent on other goods and services ($148,763); and 22.4 per cent on transportation ($187,207). Not all of the money will be spent in the summer recreation complex, or in the Pass area. For example, transportation expenses represent measurements for travel through the entire province of Alberta. Expenditures on transportation in a specific location may be small. Only 10 per cent of transportation expenses are estimated to be realized in the Pass area ($18,721). Similarly, the expenditures on "other goods and services" by the visitors of

the summer complex, is not expected to exceed $50,000. On the other hand, the expenditures on meals, groceries and refreshments, and entertainment and recreation, may be realized in full. Total estimated expenditure by visitors of the summer recreation complex, including lodging and camping expenditures, is $568,500.

4 - SKI DEVELOPMENT

Ski development would be economically feasible in the Pass, if it could be related to the accommodation facilities and other services that are required by the summer tourist trade. The base of the lifts would have to be directly accessible from the year-round hotels and motels, and from Highway 3. Under these conditions it is felt that the market calculated in Table 13 (Appendix A) could be realized in full by 1974.

4.1 - Pro Forma Statements

The total investment that would yield a reasonable return within the forecast period (to 1976) would be close to $1,308,000 (see Tables 19 to 22). This would pay for the construction of one chairlift from the base of the mountain to the top, another chairlift of about half this length, and a T-bar of moderate proportions. The expenditure would also cover slope and trail construction, an activity centre, parking, and a variety of equipment (see Table 30). The only slopes that offer the prospect of integration of summer and winter recreation into one compact area, are the southwest slopes of Bluff Mountain. If development of these slopes is not possible because of unfavourable meteorological conditions, the north and east slopes of the mountain offer excellent prospects. The extra investments required to develop the slopes (i.e. an open road), the development restrictions governing building in the forest reserves, would impose strong drawbacks. Also, the physical relationship between the hotels and motels required for the summer tourist trade will be weakened. Under these circumstances a ski development in the Crowsnest Pass may not be able to attract the full market calculated in Appendix A. The calculations included in Tables 31, 32, and 33 are based on the assumption that the southwest slopes of Bluff Mountain can be developed.

TABLE 30

ESTIMATED CAPITAL EXPENDITURES, BLUFF MOUNTAIN SKI DEVELOPMENT
(Assumed Year of Construction 1969)

		Dollars
1 Chairlift (7,850 feet)		340,000
1 Chairlift (4,800 feet)		225,000
1 T-Bar (2,300 feet)		85,000
Slope and Trail Construction (64,000 feet)		80,000
Activity Centre (Cafeteria, Entertainment, Shops, Lockers, Administration)		175,000
Skating Pond		2,000
Storage Facilities		20,000
Equipment		
Communication	$8,000	
Mechanical, Vehicles	40,000	
Snow Making	60,000	
Signs, Furnishings, Miscellaneous	35,000	143,000
Landscaping		10,000
Parking (450 cars)		23,000
Organizational Expenses and Working Capital		150,000
Planning and Engineering		55,000
Total Investment		1,308,000
65 Per Cent Outside Financing at 8 Per Cent		850,000
Required Equity		458,000
Annual Payments (Assuming Amortization period of 20 Years)		76,500

TABLE 31

ESTIMATED LABOUR EXPENSES BLUFF MOUNTAIN SKI DEVELOPMENT, 1969-1976

	1969-70 Dollars	1970-71 Dollars	1971-72 Dollars	1972-73 Dollars	1973-74 Dollars	1974-75 Dollars	1975-76 Dollars
Manager (1)	12,000	13,000	14,000	15,000	16,000	17,000	18,000
Secretary (1)	4,000	4,200	4,450	4,750	5,100	5,500	5,950
Seasonal Labour (No.)	8	10	12	14	16	18	20
Seasonal Wages Per Labourer	2,000	2,100	2,225	2,375	2,550	2,750	2,975
Wages for 5 Months	16,000	21,000	26,700	33,250	40,800	49,500	59,500
Weekend Labour (No.)	4	6	8	10	12	14	16
At $25+ per Weekend	1,000	1,050	1,125	1,225	1,350	1,500	1,675
For 40 Weekends	4,000	6,300	9,000	12,250	16,200	21,000	26,800
Total	36,000	44,500	54,150	62,250	78,100	93,000	110,250
Plus 20 Per Cent (Employee Benefits)	7,200	8,900	10,830	12,450	15,620	18,600	22,050
Total Labour Expenses	43,200	53,400	64,980	74,700	93,720	111,600	132,300

TABLE 32

ESTIMATED OPERATING EXPENSES BLUFF MOUNTAIN SKI DEVELOPMENT, 1969-1976

	1969-70 Dollars	1970-71 Dollars	1971-72 Dollars	1972-73 Dollars	1973-74 Dollars	1974-75 Dollars	1975-76 Dollars
Advertising (1)	65,400	65,400	65,400	65,400	65,400	65,400	65,400
Payroll and Benefits	43,200	53,400	64,980	74,700	93,720	111,600	132,300
Insurance (2)	6,540	6,540	6,540	6,540	6,540	6,540	6,540
Repairs and Maintenance (3)	19,620	19,620	19,620	32,700	32,700	32,700	32,700
Utilities (4)	12,000	12,000	15,159	17,866	20,818	24,021	27,570
Legal and Accounting Fees (5)	1,314	2,075	3,032	3,573	4,164	4,804	5,514
Office Supplies and Expenses (5)	1,314	2,075	3,032	3,573	4,164	4,804	5,514
Land Lease	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Improvement Tax	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Contingencies	5,000	7,000	9,000	12,000	15,000	19,000	23,000
Total Operating Expenses	162,388	175,710	194,763	224,352	250,506	276,869	306,538

(1) 5 per cent of investment ($1,308,000).
(2) 0.5 per cent of investment.
(3) 1.5 per cent of investment for first 3 years, 2.5 per cent for following years.
(4) Heating, Water, Power, etc. Minimum of $12,000 or 5 per cent of receipts.
(5) 1 per cent of receipts.

TABLE 33

ESTIMATED OPERATING REVENUES AND EXPENSES, BLUFF MOUNTAIN SKI DEVELOPMENT 1969-1976

	1969-70 Dollars	1970-71 Dollars	1971-72 Dollars	1972-73 Dollars	1973-74 Dollars	1974-75 Dollars	1975-76 Dollars
Receipts:							
Ski Lifts -							
Ticket Price (Day)	4.25	4.50	4.75	5.00	5.25	5.50	5.75
No. of skier days	30,340	45,280	62,641	70,132	77,825	85,712	94,097
Total Ticket Income	128,945	203,760	297,545	350,660	408,581	471,416	541,058
Receipts from Food Concession	2,427	3,849	5,638	6,663	7,783	9,000	10,351
Total Receipts	131,372	207,509	303,183	357,323	416,364	480,416	551,409
Operating Expenses	162,388	175,710	194,763	224,352	250,506	276,869	306,538
Operating Profit (or Loss)	(31,016)	31,799	108,420	132,971	165,858	203,547	244,871
Less Annual Payment (Principal Plus Interest)	76,500	76,500	76,500	76,500	76,500	76,500	76,500
Less Reserve for Depreciation on Equity Portion	22,900	22,900	22,900	22,900	22,900	22,900	22,900
Profit (or Loss) Before Income Tax	(130,416)	(67,601)	9,020	33,571	66,458	104,147	145,471
Percentage Profit (or Loss) on Equity	-34.4	-14.8	2.0	7.3	14.5	22.7	31.8

4.2 - Economic Impact

The economic impact of a ski development in the Crowsnest Pass would be considerable. In 1974, the equivalent of twelve full time jobs would be created, earning $93,000. Most important, however, it would bring enough overnight visitors to the Pass area during the skiing months (December through April) and put the year-round hotel/ motel industry on a sound economic footing. Occupancies of 100 per cent will be registered on most weekends during the skiing period, weekday average occupancies would be boosted by 25 to 40 per cent.

The total number of skier visits in the 1974-75 season would be 85,712. The average daily expenditure per skier according to the findings of R.B. Herrington,[16] was $20.54. Assuming an average annual growth rate in daily expenditure of five per cent, the average skier will spend about $30 per day in the 1974-75 season. The total expenditure by skiers in the Pass could reach $2,136,280. Of this amount about $471,420 will be required for lift tickets. The remaining $1,664,860 may be spent as follows: meals and lodging $750,000; rental or repair of equipment $116,000; ski lessons $85,000; other recreation and entertainment $285,000; equipment purchases at destination $160,000; transportation $144,860 and miscellaneous expenses $125,000.

No employment and income multiplier calculations comparable to the ones used for summer recreation are available. It is obvious that ski development would be a very important factor in sustaining the employment requirements of hotels and motels. It would also be a strong factor in the creation of indirect personal income.

4.3 - Other Recreation Development

The development cost of a walking trail through the recommended forest reserve extension would be about $55,000. This amount includes $20,000 for about six miles of trails (including benches) $30,000 for a number of footbridges over the Crowsnest and other rivers, and $5,000 for a parking lot adjacent to Highway 3 at the east end of the extension. A provincial camping site could be developed near the small lake formed by the Crowsnest River. These sites would be directly competitive with the camping sites that are part of the summer recreation complex. They could be operated by the developer of this complex. It is most important with regard to the feasibility of the summer complex that camping fees are charged comparable to the fees charged by private enterprise.

A second phase development is the preparation of part of the coal mine just north of Blairmore for mine tours. Although this project could be a private enterprise venture, it could be tied in with the mining section of the museum in the historical town. About $500,000 would be involved in this reconstruction job. The parking lot used by skiers in the winter would be adequate to serve the mine tour clientele in the summer. About 25 per cent of the visitors to the historical complex could be attracted, or about 47,000 people in 1974.

A heated mineral pool in the vicinity of the historical complex is also considered as a second phase project. The construction costs of the pool and heating installations are estimated between $75,000 and $125,000. The success of the historical complex in creating a tourist market in the Crowsnest Pass will determine the timing of construction and economic feasibility of the pool. Calculations of potential market penetration could not be made because of lack of data.

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1 Frank Anderson, The Frank Slide Story, Frontiers Unlimited, Calgary, Alberta.

2 Including an old steam locomotive as used by the Canadian Pacific Railways during the early decades of the 20th century.

3 T. A. Bostick, "The Automobile in American Daily Life," Public Roads, December, 1963.

4 $\frac{(440,000 \times 83.6)}{100}$: 0.25

5 R. I. Wolfe, Parameters of Recreational Travel in Ontario: A Progress Report, 1966.

6 $Vij = K \frac{Pi^{p} \, Cj^{c}}{Dij^{d}}$

where: Vij = cottagers, campers or commercial guests travelling from region i to area j.
Pi = population of region i.
Cj = capacity of area j.
Dij = distance in miles between i and j.
Parameters used for campers and commercial guests: p-1.14; c-1.05; and d-1.30.

7 Kates, Peat, Marwick and Company, op. cit., Vol. 2, Appendix F, Table 39.

8 Op. cit., Report 19, Page 60.

9 J. W. Thorsell, op. cit., Figure 11.

10 Source: J. W. Thorsell, op. cit., Graph opposite p. 17.

11 Source: H. G. Acres and Company, Niagara Falls Traffic Study, Vol. I; Figure 5.5. Niagara Falls, Ontario, 1963.

12 Alberta Government Travel Bureau, Alberta Visitor Accommodation Survey, 1965, pp. 6 and 10.

13 $\frac{(a \times b)}{c} \times \$14$

where: a = number of weekend or weekday days in each month.
b = the number of rooms (115).
c = the percentage occupancy on weekends or weekdays in each month.

14 Kates, Peat, Marwick and Company, op. cit., Vol. 2, Appendix F, Table 39.

15 Ibid.

16 R. B. Herrington, op. cit., Table 26.

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APPENDIX A

MARKET ANALYSIS

1 - A TIME SERIES OF RELEVANT RECREATION ACTIVITIES

An appraisal of the Alberta regional travel and recreational characteristics should begin with an examination of trends in the tourism and recreation market. Only one time series relevant to this study could be found: the annual total number of visitors to three national parks in Alberta between 1957 and 1966, as illustrated in the following table.

TABLE 1

THE NUMBER OF VISITORS TO THREE NATIONAL PARKS LOCATED IN ALBERTA AND A PROJECTION OF THE TOTAL NUMBER OF VISITORS TO 1976

Year	(1) Number of Visitors to Banff National Park	(2) Number of Visitors to Jasper National Park	(3) Number of Visitors to Waterton Lakes National Park	(4) Number of Visitors Total
1957	790,910	332,024	302,872	1,425,806
1958	880,150	332,251	362,829	1,575,230
1959	980,069	324,857	340,220	1,645,146
1960	1,078,008	356,538	349,496	1,784,042
1961	1,069,623	346,493	420,865	1,836,981
1962	1,374,576	392,987	444,752	2,212,315
1963	1,650,257	468,579	441,803	2,560,639
1964	1,605,784	480,102	371,258	2,457,144
1965	1,800,000	523,000	390,000	2,713,000
1966	1,900,400*	550,000*	487,600	2,938,000
1967				3,182,000
1968				3,446,000
1969				3,732,000
1970				4,042,000
1971				4,377,000
1972				4,740,000
1973				5,133,000
1974				5,559,000
1975				6,020,000
1976				6,520,000

* Estimates

Source: See reference 1.

Two significant points are noted here. The first is a persistent upward trend in the annual number of visitors to each of the National Parks. The second point is the sharp break in the total number of visitors to Banff and Jasper National Parks which occurred in 1962. This is attributed to the completion of large sections of the Trans-Canada Highway. While there are strong upward trends in visiting rates to each park, the figures may be altered dramatically by changes in travel conditions.

The persistent increase in visits to the parks is consistent with outdoor recreation experience throughout North America. Upward trends are evident in almost all time series data of visits to all types of recreational areas, in other travel figures and in the issuance of licences for and sales of recreation equipment.

The trend in recreation and tourism activity in the Province of Alberta is not documented with time series. In a study of non-resident travel in Alberta, the out-of-province visitors numbered 1,125,000 during the 100-day season between May 28 and September 5, 1966.[2] According to a study of inter-provincial travel in Canada, by McDonald Research Limited (covering the 12 months preceding October, 1965), about 64 per cent of all travel on trips of 100 miles or more for vacation and recreational purposes, takes place during this 100-day period.[3] If this percentage is applied to the findings of the non-resident travel study, the total number of out-of-province visitors in 1966 would have been around 1,750,000 (1,125,000 x 100/64). That figure would include visits for vacation, business, personal, and other purposes.

McDonald Research Limited discovered that a total of 1,190,000 Canadians travelled to Alberta in the 12 months preceding October, 1965. In the report prepared by Kates, et al., Canadian visitors represent 64.3 per cent of all out-of-province visitors to Alberta. The remaining one-third originate in the United States (only about 1.5 per cent of all visitors came from other countries). By combining the results of the two studies, the total number of out-of-province visitors to Alberta in 1965 is estimated at 1,850,000 (1,190,000 x 100/64.3).

The size of the sample in both the inter-provincial and the non-resident travel studies was small (less than 1 per cent and approximately 2 per cent respectively), and their methods of data collection different (telephone interviews versus roadside interviews). Nevertheless, the figures are indicative of the number of visitors to the province. They are used as the high figure (1,850,000 in 1965) and the low figure (1,750,000 in 1966) in the following calculations. No other data concerning the total number of visitors to Alberta are available.

In developing a time series for out-of-province visits to Alberta, the relationship between the number of visitors to the province, and the number of visitors to the three national parks in Alberta is assumed to be constant. If the assumption is acceptable, the time series available for national park attendance can be used to project the total number of out-of-province visitors to Alberta in the next ten years. The average annual growth rates for the combined parks is 8.3 per cent between 1957 and 1966 (Banff 10.9 per cent, Jasper 5.9 per cent, and Waterton Lakes 5.4 per cent).

TABLE 2

THE ESTIMATED NUMBER OF OUT-OF-PROVINCE VISITORS TO ALBERTA, 1965-1976

	(1)	(2)	(3)	(4)
		Alberta Estimates		
Year	Total Number of Visitors to Three Alberta National Parks	Number of Visitors High	Number of Visitors Low	Number of Visitors Mean***
1957	1,425,806			
1958	1,575,230			
1959	1,645,146			
1960	1,784,042			
1961	1,836,981			
1962	2,212,315			
1963	2,560,639			
1964	2,457,144			
1965	2,713,000	1,851,000*	1,622,000	1,736,500
1966	2,938,000	2,005,000	1,758,000**	1,881,500
1967	3,182,000	2,174,000	1,905,000	2,039,500
1968	3,446,000	2,356,000	2,065,000	2,180,500
1969	3,732,000	2,553,000	2,238,000	2,395,500
1970	4,042,000	2,767,000	2,424,000	2,595,500
1971	4,377,000	2,997,000	2,627,000	2,812,000
1972	4,740,000	3,248,000	2,847,000	3,047,500
1973	5,133,000	3,521,000	3,085,000	3,303,000
1974	5,559,000	3,815,000	3,344,000	3,579,500
1975	6,020,000	4,134,000	3,623,000	3,878,500
1976	6,520,000	4,480,000	3,926,000	4,203,000

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* Measurement by McDonald Research Limited expanded by the number of visitors of United States origin.

** Based on measurement by McDonald Research Limited and Kates, Peat, Marwick and Co.

*** $\bar{x} = \frac{(2) + (3)}{2}$

2 - TRAVEL PATTERNS

A description of travel patterns within the Province of Alberta is important in appraising the feasibility of recreation development in the Crowsnest Pass. Two indications of travel patterns within the province were found.[4] The most important characteristic is the overwhelming importance of the Trans-Canada Highway (Highway 1). Almost three-quarters of all the visitors entering Alberta from the east were travelling along Highway 1. About 50 per cent did not leave this route on their way to Banff and Jaspter National Parks. Another 23 per cent visited points along the highway and returned along the same route. Only about 9 per cent of the visitors entering from the east selected Highway 3 and the Crowsnest Pass route on their way through the province.

About 30 per cent of all the visitors entering the province from the south (via Highways 2, 4 and 6) returned via this route after visiting points in southwestern Alberta. Another 30 per cent travelled via Highway 1 to Banff and Jasper National Parks. About 10 per cent travelled westward along Highway 3 and through the Crowsnest Pass.

About 14 per cent of all visitors entering Alberta from the west make use of Highway 3. The remainder enter via Highways 1 (75 per cent) and 2 (11 per cent). Close to 6 per cent of all visitors enter from British Columbia via Highway 3 and the Crowsnest Pass.

A clear travel pattern emerges from an examination of these sources. Banff and Jasper National Parks are points of destination for about half the travellers entering the province from the east, for about one-third of the travellers entering the province from the United States, and for perhaps as many as 75 per cent of the travellers entering the province from the west. Of the visitors entering the province from the south, about one-third visited points in southwest Alberta only,[5] mainly

Waterton Lakes Nation Park. The most important routes travelled are the east-west Highway 1, and the north-south Highways 2 and 6. The east-west connection offered by Highway 3 has so far attracted few travellers entering from the west, and far fewer travellers entering from the east, than the Trans-Canada Highway.

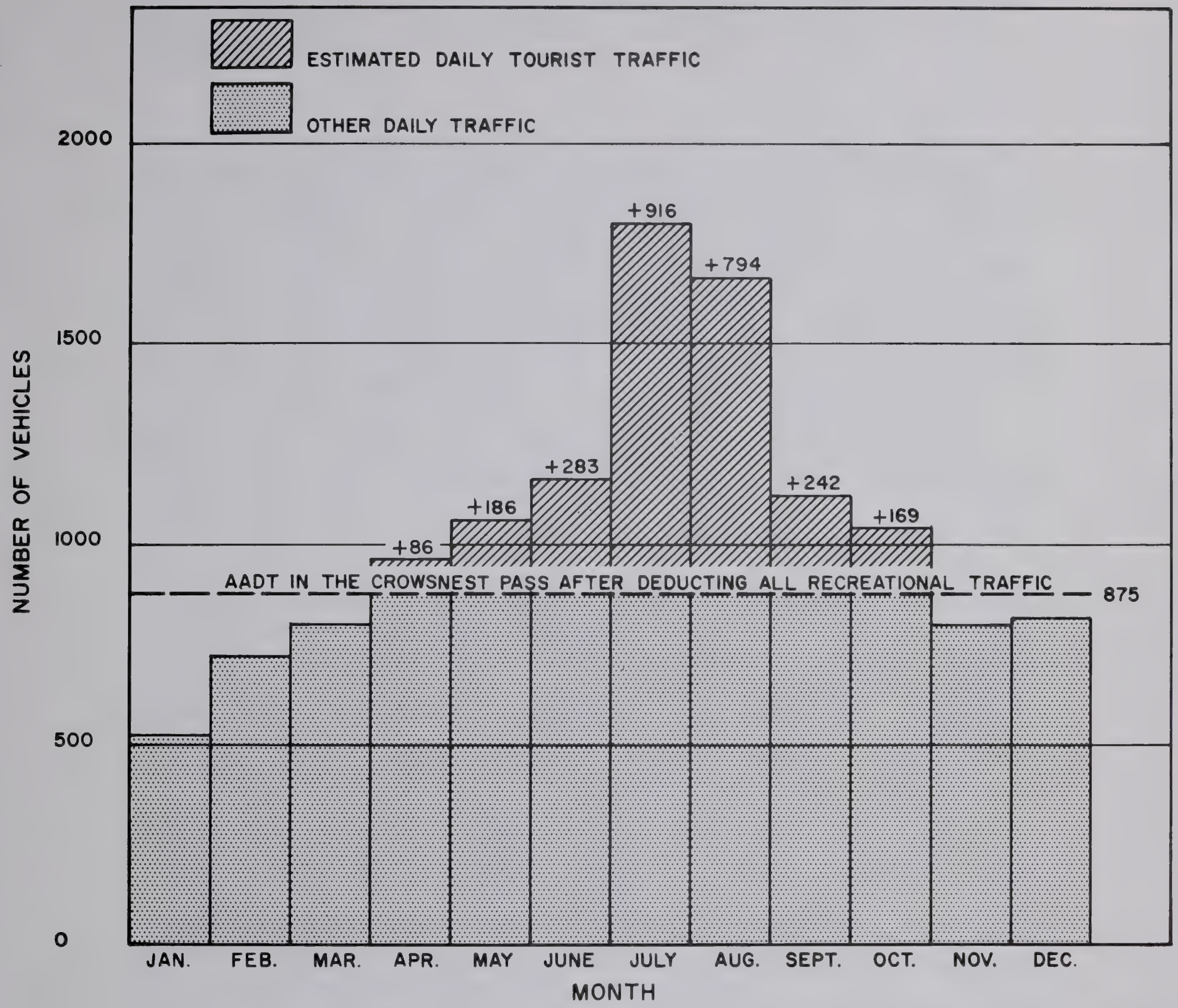
3 - TRAVEL THROUGH THE CROWSNEST PASS

According to the findings of the non-resident travel study,[6] the number of out-of-province visitors that travelled through the Crowsnest Pass was 111,540 in 1966. This figure represents summer traffic only for a 100-day travel period. If factored with the ratio found earlier in the report by the inter-provincial travel study,[7] a total all year-round out-of-province number of 174,300 visitors is derived. No data on the number of Alberta residents travelling through the Pass are available. However, research carried out by J.W. Thorsell in Waterton Lakes National Park indicated that approximately 28 per cent of all the visitors to this park are Alberta residents.[8] If this percentage is applied to the Crowsnest Pass area, the total number of visitors travelling through the Pass for vacation and recreation purposes (= tourists) in 1966 amounted to about 242,000.

The traffic counts maintained by the Alberta Department of Highways can be used in an alternative method to estimate the travellers through the Pass in 1966. These counts indicate an average annual daily traffic (AADT) count in the Pass of 1,045 vehicles in 1966.[9] Multiplied by the number of days of the year(365), the total number of vehicles that travelled through the Pass is 381,425.

The average number of people in each vehicle is estimated at 3. The total number of people travelling through the Pass in 1966 is 1,144,275. Not all were travelling for vacation and recreation purposes. To find this group, the following procedure was followed. The AADT is influenced strongly by the summer vacation and recreation travel. Monthly traffic counts are not available for the Crowsnest Pass in 1966. But such figures are provided for Highway Counter No. 28 on Highway 3, west of the junction between Highways 2 and 3. The monthly pattern shown by counter No. 28 is probably comparable to the monthly traffic variations in the

FIGURE 8 CROWSNEST PASS. AVERAGE DAILY TRAFFIC BY MONTH, 1966



SOURCE: DEPARTMENT OF HIGHWAYS, PROVINCE OF ALBERTA, ANNUAL TRAFFIC ANALYSIS REPORT, ROAD COUNTER 28, 1966

NOTE: THE PATTERN OF MONTHLY AVERAGE DAILY TRAFFIC (ADT) FIGURES MEASURED BY COUNTER NO· 28 IS ASSUMED TO BE RELEVANT TO THE ADT PATTERNS BY MONTH IN THE CROWSNEST PASS. THE "NORMAL" AADT IN THE PASS (= ALL DAILY TRAFFIC AFTER DEDUCTION OF ESTIMATED TOURIST TRAFFIC) IS CALCULATED ON THE BASIS OF THE MEASUREMENTS FROM SEPTEMBER TO MAY (9 MONTHS)

Crowsnest Pass. Also, the daily traffic peaks in June, July and August are caused by tourist traffic[10] (see Figure 8).

The difference between the normal AADT (=estimated traffic without vacation and recreation traffic generated by out-of-province and other than local travellers) and the figures indicating the daily traffic averages in each month in Figure 8, was assumed to represent traffic for vacation and recreation purposes generated by out-of-province visitors and Alberta residents. Pass residents are excepted. The number of vehicles found to be travelling through the Pass for vacation and recreation purposes by this method was 82,345. If the average occupancy per vehicle is 3 persons, the total number of tourists travelling through the Pass in 1966 amounted to about 247,000.

A third method for estimating the total number of tourists travelling through the Pass is based on the information published by the Alberta Government Travel Bureau in its 1964 Travel Survey.[11] It is substantiated by the findings of the 1966 non-resident travel study.[12] Of all the out-of-province visitors to Alberta in 1964, 5.2 per cent entered through the Crowsnest Pass, and 3.7 per cent left via this route. The number of out-of-province visitors to Alberta in 1964 can be estimated by extending Alberta projections in Table 2 back in time to cover the year 1964. A range of 1,500,000 to 1,640,000 out-of-province visitors to Alberta in 1964 is found. Application of the ingress and egress percentages would provide the following statistics.

TABLE 3

THE ESTIMATED NUMBER OF OUT-OF-PROVINCE VISITORS TO ALBERTA TRAVELLING THROUGH THE CROWSNEST PASS, 1964

	(1) High	(2) Low	(3) Mean*
Number of Visitors Entering Alberta via Highway 3	85,280	78,000	81,640
Number of Visitors Leaving Alberta via Highway 3	60,680	55,500	59,090
TOTALS	145,960	133,500	140,730

* $\bar{x} = \frac{(1) + (2)}{2}$

If the totals in this table cover all out-of-province tourist movements in 1964, adjustment of these figures to take into account the possible Alberta resident trips through the Pass (+28 per cent) bring the totals to 202,722 (high), and 185,417 (low), with a mean of 194,069.

The results of the alternative methods of estimating the number of tourists travelling through the Crowsnest Pass are summarized in the following table.

TABLE 4

THE ESTIMATED NUMBER OF TOURISTS TRAVELLING THROUGH THE CROWSNEST PASS

	(1)	(2)	(3)	(4) Figures in (3) as a Percentage of the Total Out-of-Province Visitors to Alberta - mean figure**
Year	High	Low	Mean	
1964	202,722	185,417	194,069	12.3***
1965	-	-	209,160*	12.0***
1966	246,942	242,083	244,512	12.9***

NOTE: (-) no data available.

* 246,942 (= road count) x 84.7/100. According to the Alberta Department of Highways, Annual Traffic Analysis Reports, Road Counter 28, 1966, the 1966 traffic volume over Highway 3 near Counter 28 was 15.3 per cent higher than the 1965 volume.

** See Table 2, column (4).

*** $\bar{x}$ = 12.4 per cent.

4 - ORIGIN OF VISITORS

Complete visitor-origin data are found in the Travel Surveys[13] conducted by the Alberta Government Travel Bureau and in the study carried out by Kates, et al.[14] The figures resulting from these studies are valid for the entire Province of Alberta. The figures for particular parts of the province may differ significantly from the provincial averages. The non-resident travel study revealed that 64.3 per cent of all out-of-province visitors to Alberta are of Canadian origin, and 34.3 per cent of United States origin. In a gate survey analysis of Waterton Lakes National Park by J.W. Thorsell, it was found that 54.4 per cent of all visitors to Waterton were from the United States.[15] If the visitors from Alberta are eliminated from the Thorsell figures, it may be assumed that more than 75 per cent of all out-of-province visitors to this park were from the United States. The relative differences between individual zones, or parts of the province, in relation to the provincial average, are substantiated by the Alberta Accommodation Visitor Survey carried out by the Alberta Government Travel Bureau in 1965.[16]

The significance of the origin of visitors' data is in the difference in average party size and party composition (i.e., adults/children ratio), average length of stay and accommodation requirements, average expenditure, and types of activities engaged in by tourists from various areas. Origin data for the tourists travelling through the Crowsnest Pass are not available. For the purpose of later calculations, it is assumed that the origin characteristics of tourists in the Pass are comparable to the origin characteristics of visitors to Waterton Lakes National Park. This permits the use of the research and findings published in a gate survey analysis by J.W. Thorsell. Modifications peculiar to tourism in the Crowsnest Pass will be introduced, wherever data collected during the field survey and site analysis permit.

5 - AVERAGE LENGTH OF STAY

An important characteristic of the tourist travel pattern in Alberta is the average length of stay within the province. The non-resident travel study indicates an average length of stay of 4.88 nights. The only data on length of stay in southwestern Alberta, including Waterton Lakes National Park, the City of Lethbridge, and the Crowsnest Pass, are found in the survey of hotel/motel accommodation. For overnight visitors in zone 1[17] an average length of stay of 1.68 nights was recorded. In Waterton Lakes National Park, the average length of stay of hotel/motel guests is 1.8 days.[18] The camper's average length of stay is 2.6 days. The total average length of stay of hotel/motel guests and campers in the park is 2.4 days.

An important observation in the Waterton report concerns the sharp decline in average length of stay (from 5.5 to 2.4 days) between 1961 and 1966. This trend is also observed in other National Parks. It has significant implications for the recreation and accommodation facilities that could be planned in the Crowsnest Pass.

The average length of stay of overnight visitors in the Pass is well below the level measured in Waterton Lakes National Park. It is also below the 1.68 figure for southwest Alberta. A brief survey of hotel/motel owners in the Pass indicates that an average of 1 night is a realistic working assumption. Since only a small section of the Pass area between Burmis and the British Columbia boundary was studied, the average is not surprising. Also, the number of known and advertised attractions and facilities is small.

An important characteristic of travel through the Pass should be noted here. According to the non-resident travel study,[19] about 38 per cent of all the visitors to southwestern Alberta stay overnight in zone 1. J.W. Thorsell found that in Waterton Lakes National Park more than 50 per cent of all visitors stay overnight.[20] The percentage for the Crowsnest Pass is much smaller.

The Pass possesses about 70 hotel/motel units with the potential to serve the tourist trade. This figure excludes a total of about 160 rooms maintained by hotels found in the centres of the towns of Bellevue, Blairmore and Coleman. The older establishments lack many services and facilities required to penetrate the tourist market effectively. The remaining 70 units reported an average occupancy during the peak travel months of July and August of about 75 per cent. Levels in June and September are much lower. About 25 of the 70 units are closed in the winter.

The number of room/nights offered by the 70 units during the June to September (122 days) period, is 8,540. The 75 per cent average occupancy figure would indicate a peak demand for 6,405 units during the summer season. This would accommodate about 14,400 person/nights (at an average of 2.25 persons per room).[21] A comparison of this figure with the amounts in Table 5 on page A-14 for 1966 indicates that less than 7 per cent of the potential person/nights (244,512 mean estimate) is realized by the hotel/motel industry. This percentage will need further reduction after the effects of persons travelling for other than vacation and recreation purposes, and seasonality in tourist travel are calculated.

Occupancy figures for approximately 100 camp-sites now available in the Pass could not be obtained. A 75 per cent average occupancy of the sites during the camping season (July 1 to September 5--67 days) would add an additional 18,090 person/nights (at 3.6 persons per camp-site)[22] to the overnight stays in the Pass. This would bring the total number of overnight stays, (= person/nights) expressed as a percentage of the total potential market, to 15.

6 - PROJECTION OF TRAVEL THROUGH THE CROWSNEST PASS

For the three years that estimates of the number of tourists travelling through the Pass could be made, the totals represented between 12 and 13 per cent of the total number of visitors to the Province of Alberta (see Table 4). The mean is 12.4 per cent. For lack of other data, the projection is based on the assumption that the relationship between the tourists travelling through the Crowsnest Pass and the out-of-province visitors to Alberta is constant (12.4 per cent), as computed in Table 5.

TABLE 5

THE ESTIMATED NUMBER OF TOURISTS TRAVELLING THROUGH THE CROWSNEST PASS, 1964-1976

Year	(1) High	(2) Low	(3) Mean*
1964	202,722	185,417	194,069
1965	-	-	209,160
1966	246,942	242,083	244,513
1967	269,500	236,000	253,000
1968	292,000	256,000	274,000
1969	316,500	277,500	297,000
1970	343,000	300,500	322,000
1971	371,500	325,500	348,500
1972	403,000	353,000	378,000
1973	436,500	382,500	409,500
1974	473,000	414,500	444,000
1975	512,500	449,000	481,000
1976	555,500	487,000	521,000

* $\bar{x} = \frac{(1) + (2)}{2}$

The projection is directly related to the projections made earlier for total attendance at three national parks located in Alberta, and to the out-of-province visits to Alberta. It is based on the average annual growth rate of 8.3 per cent. Further calculations are based on the mean projection in Table 5.

7 - THE CROWSNEST PASS SUMMER MARKET

So far, only annual tourist market figures are developed. However, their meaning for facility planning and feasibility evaluation is limited. More detailed calculations with regard to seasonality, weekday and weekend traffic, and average length of stay will be required to develop a meaningful concept of the summer and winter markets.

The sources used to develop the annual projections permit a logical derivation of the summer markets from the annual figures by applying monthly traffic data and weekend-weekday travel ratios. This method is not adequate for estimating the potential winter market (there would not be any). Multiple regression analysis was used to estimate the skiers' market that could be attracted by development of the ski potential in the Crowsnest Pass.

The key difference reflected in the estimating techniques between the summer and winter markets is that the summer market can be found in the Pass. So far, little exploitation of the summer market has been attempted. At present, the Pass route is little more than a through highway and induces few tourists to stop.

On the other hand, the winter market must be generated entirely. That is an expensive and time consuming process. The winter recreational facilities that could be developed would be in direct competition with other winter recreation facilities in the province that offer the same programmes and are located more favourably with respect to population centres.

The main potentials of the Pass area, as outlined in Volume 1, Chapter 1, Site Analysis, allow a wide scope for developing recreational experiences which are unique in the Province of Alberta. The proposals contained in this report are indicative of such developments and their economic feasibility.

The monthly variations in the 1966 tourist flow through the Crowsnest Pass, illustrated by Figure 8, is tabulated in the following table.

TABLE 6

THE MONTHLY VARIATIONS IN THE 1966 TOURIST TRAFFIC THROUGH THE CROWSNEST PASS

Month	Tourist Traffic Vehicles	Tourist Traffic Persons*	Percentage of Total Traffic
April	2,580	7,740	3.1
May	5,766	17,298	7.0
June	8,490	25,470	10.4
July	28,396	85,188	34.5
August	24,614	73,842	29.9
September	7,260	21,780	8.8
October	5,239	15,717	6.3
TOTAL	82,345	247,035	100.0

* Estimated average party size 3.0 persons.

July and August account for 64.4 per cent of all tourist traffic, June, July, August and September (= summer season, 122 days) for 83.6 per cent. Summer peaking in the Pass is considerably higher than Canadian interprovincial travel as a whole.[23] This sharp peaking of tourist travel could seriously restrain the development and feasibility of accommodation and recreation facilities in the Pass.

The growth of the summer market, based on the annual 122-day travel season (including the months of June, July, August and September) is calculated in Table 7. The percentage relationship between total tourist travel and the summer season travel is based on the ratios found for 1966 in Table 6. In Table 8, the distribution of tourists for each month of the summer season in each of the forecast years (1968 to 1976) is calculated.

TABLE 7

A PROJECTION OF THE NUMBER OF SUMMER VISITORS TO THE CROWSNEST PASS, 1964-1976

Year	(1) Annual Mean Projection of Visitors	(2) Summer Market Projection of Visitors*	(3) Generated Traffic**	(4) Total (2)+(3)
1964	194,069	162,237		162,237
1965	209,160	174,857		174,857
1966	244,513	204,412		204,412
1967	253,000	211,508		211,508
1968	274,000	229,064		229,064
1969	297,000	248,292	5,500	253,792
1970	322,000	269,192	10,900	280,092
1971	348,500	291,346	21,800	313,146
1972	378,000	316,008	32,700	348,708
1973	409,500	342,342	43,600	385,942
1974	444,000	371,184	54,500	425,684
1975	481,000	402,116	59,000	461,116
1976	521,000	435,556	64,000	499,556

* Including the months of June, July, August and September.

** First calculation of generated summer market traffic made for the year 1974. This is the first year that the summer recreational developments in the Pass are expected to be completed. The generated traffic indicated in Column (4) in the years preceding 1974 is estimated on the basis of the 1974 performance.

TABLE 8

DISTRIBUTION OF SUMMER MARKET TRAVEL IN THE CROWSNEST PASS BY MONTH, 1968-1976

Year	June	July	August	September
1968	28,403	94,603	82,004	24,051
1969	31,470	104,816	90,857	26,648
1970	34,731	115,678	100,272	29,409
1971	38,830	129,329	112,106	32,880
1972	43,239	144,016	124,837	36,614
1973	47,856	159,394	138,167	40,523
1974	52,784	175,807	152,394	44,696
1975	57,178	190,440	166,079	48,417
1976	61,944	206,316	178,841	52,453

The summer market projection (including estimated generated summer tourist traffic) attempts to take account of the effect of the increased drawing power of the Crowsnest Pass route with tourist and recreational developments similar to those used for calculation purposes in this report. Detailed calculations of traffic generated because of increased drawing power are included in Appendix B, pages B-9, B-10 and B-31.

8 - THE ALBERTA SKIER MARKET

The number of skiers using Alberta ski areas grew rapidly between the 1960-1961 and the 1966-1967 seasons. Table 9 lists the attendance figures in skier visits to the six major ski areas in the province. They indicate trends in the provincial ski market.

TABLE 9

THE NUMBER OF SKIER VISITS TO SIX MAJOR SKI AREAS IN ALBERTA 1960-1967

Ski Area	1960-1961 Visitors	1963-1964 Visitors	1965-1966 Visitors	1966-1967 Visitors
Mount Norquay	25,113	46,834	45,910	61,524*
Sunshine	7,946	38,940	77,019	87,780
Lake Louise	31,146	38,215	38,182	58,535
Pigeon Mountain		12,000	16,000	17,000*
West Castle				16,300
Marmot Basin/ Whistler's Mountain		20,000*	41,603	45,000*
TOTAL	64,202	117,490	218,482	286,140

* Estimated.

Source: Department of Indian Affairs and Northern Development, National and Historic Parks Branch.

The average annual increase in the total number of skier days measured at the six areas between 1960 and 1967 is over 28 per cent. By contrast, the total number of skier visits to all ski areas in the Western United States between the 1955 to 1966 season and the 1963-1964 season increased approximately 15.5 per cent per year[24] (compounded average annual growth rate). Acceleration of the average annual growth rate during the 1960 to 1964

period, as compared to the 1956 to 1960 period in the Western United States ski market is noted by R.B. Herrington.[25] This author expects future growth rates in the Western United States to decline sharply (to an annual rate of 8.3 per cent between 1965 and 1976).[26] The projection is based on a multiple regression analysis of the factors closely related to the growth of skiing in the Western United States, e.g., increases in population, per capita income, and amount of leisure time. Although the factors do not explain why people ski, their association with ski area attendances seem logical: a greater proportion of an increasing population will have both the money and the time to go skiing. The widespread variables were found to account for 96 per cent of the variations in total annual skier attendance.

To predict objectively the number of skier visits expected in the six major ski areas representing the Alberta market, the variables used by Herrington,[27] along with a time variable, were regressed. Where possible, Alberta data are noted.

The regression inputs are tabulated in Table 10.

TABLE 10

SKI MARKET ANALYSIS
REGRESSION INPUTS

(1) Year	(2) Number of Skier Visits*	(3) Alberta Population**	(4) Income per Capita*** (dollars)	(5) Leisure Time**** (hours)	(6) Time
1960-1961	64,202	1,291,000	1,116	23.1	1
1961-1962	77,230	1,332,000	1,143	23.4	2
1962-1963	92,210	1,370,000	1,184	23.6	3
1963-1964	117,490	1,405,000	1,203	23.8	4
1964-1965	173,900	1,432,000	1,290	24.1	5
1965-1966	218,482	1,451,000	1,338	24.3	6
1966-1967	286,140	1,463,000	1,387	24.5	7

* Number of skier visits for six major Alberta ski areas.

** Dominion Bureau of Statistics--1961 and 1966 Census, and Canada Yearbook, for inter-census year.

*** Department of National Revenue--Taxation Statistics, Part I, Table 1, Ottawa 1961 to 1965. Per capita income figures obtained by dividing total income by the population. Estimates for 1965 and 1966 per capita income are made by increasing the 1964 figures by 5 per cent per annum.

**** Leisure time in hours per worker. Source: Outdoor Recreation Resources Review Commission--Prospective Demand for Outdoor Recreation, Study Report 26, page 6, Washington, D.C., 1962.

The regression results are expressed in the following mathematical equation.

$$Y = -702.72X_1 + 989.81X_2 - 6188.43X_3 + 12192.22X_4$$

where: Y = the number of skier visits to six major Alberta ski areas
X_1 = the population of Alberta
X_2 = per capita income in Alberta in dollars (current)
X_3 = leisure time in hours per week per worker
X_4 = time scale in number of years

The R^2 of this regression is 99.5 per cent.

As mentioned, six areas were considered as representative of the Alberta ski market. Based on the regression equation, the number of skier visits to these areas were projected. The Alberta Department of Industry and Development population projection[28] were used. The income per capita was estimated to increase at a rate of 5 per cent per year, and the leisure time per week per worker at a rate of 0.23 hours per year.[29] The results of this analysis are calculated in Table 11.

TABLE 11

THE NUMBER OF SKIER VISITS IN SIX MAJOR ALBERTA SKI AREAS 1967-1976*

(1) Year	(2) Total Visits	(3) Population -702.7	(4) Income per Capita +989.8 (dollars)	(5) Leisure Time -6,188.4 (hours)	(6) Time 12,192.2
1967-1968	323,500	1,511,000	1,456	24.8	8
1968-1969	370,500	1,561,000	1,528	25.0	9
1969-1970	421,000	1,612,000	1,604	25.2	10
1970-1971	474,500	1,664,000	1,684	25.4	11
1971-1972	529,500	1,719,000	1,768	25.7	12
1972-1973	597,000	1,762,000	1,856	25.9	13
1973-1974	668,000	1,808,000	1,949	26.1	14
1974-1975	741,000	1,855,000	2,046	26.4	15
1975-1976	820,000	1,902,000	2,148	26.6	16

* The R^2 of this regression is 99.5 per cent.

9 - WEEKEND, VACATION AND WEEKDAY DEMAND

The majority of all skier visits to Alberta ski areas occur on weekends and holidays. R.B. Herrington found that 70 per cent of all demand was recorded on weekends and holidays in the Western United States.[30] In a study by Marshall, Macklin and Monaghan on skiing in Jasper National Park,[31] about 80 per cent of all demand was measured on weekends and holidays. Sno-Engineering Incorporated, in their 1965 report on the skier market in Northeast North America[32] found that 62.5 per cent of the demand occurred on weekends and holidays. About 73 per cent of the skier visits in the six major Alberta ski areas, referred to above, were measured on weekends and holidays.

The pressure on ski facilities (mainly lifts and tows) on weekends and holidays has caused the percentage to decline in relation to the total demand. This trend is likely to continue. About 63 per cent of the total demand is expected on weekends and holidays in 1970, and 55 per cent in 1976.

In the major Alberta ski areas, vacation skiing is becoming more popular. About 15 per cent of all ski visits in 1966 were generated by people on a ski vacation in Alberta. About 13.5 per cent of all skier visits to sites in Northeast North America[33] in the 1962-1963 season were generated by vacationers. By 1976, the number of skier visits by vacationers is projected to grow to 25 per cent of the total. About two-sevenths of these visits will take place on weekends and holidays, five-sevenths on weekdays.

The tendencies in the weekend/holiday market and the vacation market, as projected above, result in a growing importance of the weekday market. At present, about a quarter of all the skier visits to major Alberta ski areas are weekday visits. By 1970, the proportion will have grown to about one-third of the market. By 1976, it will have grown to 45 per cent. Detailed tabulations are included in Table 12.

TABLE 12

WEEKEND/HOLIDAY, VACATION AND WEEKDAY SKIER VISIT PROJECTION FOR SIX MAJOR ALBERTA SKI AREAS 1966-1976

	Total		Weekend and Holiday Skier Market							
	Skier Visits		Weekend Demand (including overnight stay)		Vacation Weekend Demand		Weekend Day Demand		Total Weekend Demand	
Year	Number	%	Number	%	Number	%	Number	%	Number	%
1966-1967	286,140	100.0	117,890	41.2	12,304	4.3	78,689	27.5	208,882	73.0
1967-1968	323,434	100.0	128,727	39.8	14,878	4.6	86,033	26.6	229,638	71.0
1968-1969	370,520	100.0	142,650	38.5	20,622	4.9	94,853	25.6	255,658	69.0
1969-1970	420,861	100.0	156,139	37.1	21,464	5.1	104,374	24.8	281,977	67.0
1970-1971	474,459	100.0	169,856	35.8	25,621	5.4	112,921	23.8	308,398	65.0
1971-1972	529,290	100.0	182,076	34.4	30,170	5.7	121,207	22.9	333,453	63.0
1972-1973	597,130	100.0	197,053	33.0	35,828	6.0	131,369	22.0	364,249	61.0
1973-1974	667,812	100.0	211,029	31.6	42,072	6.3	140,908	21.1	394,009	59.0
1974-1975	741,132	100.0	223,822	30.2	48,915	6.6	149,709	20.2	422,445	57.0
1975-1976	820,019	100.0	236,657	28.9	56,581	6.9	157,772	19.2	451,010	55.0

NOTE: The total weekend demand (less vacation weekend demand) was broken down into weekend skiers staying overnight and weekend day skiers as follows: 50 per cent of all skiers stay overnight (source: Sno-Engineering--The Skier Market in Northeast North America); weekend day skiers ski an average of 1.2 days per weekend; weekend skiers staying overnight ski an average of 2 days per weekend. On this basis the weekend demand including overnight stays involves 60 per cent of the weekend/holiday demand, the weekend day demand 40 per cent.

continued on next page

TABLE 12 (cont'd)

WEEKEND/HOLIDAY, VACATION AND WEEKDAY SKIER VISIT PROJECTION FOR SIX MAJOR ALBERTA SKI AREAS 1966-1976

	Weekday Skier Market					
	Vacation Weekday Demand		Weekday Demand		Total Weekday Demand	
Year	Number	%	Number	%	Number	%
1966-1967	30,617	10.7	46,641	16.3	77,258	27.0
1967-1968	36,871	11.4	59,924	17.6	93,801	29.0
1968-1969	44,833	12.1	70,028	18.9	114,861	31.0
1969-1970	54,291	12.9	84,593	20.1	138,884	33.0
1970-1971	64,526	13.6	101,534	21.4	166,060	35.0
1971-1972	75,688	14.3	120,149	22.7	195,837	37.0
1972-1973	89,570	15.0	143,311	24.0	232,881	39.0
1973-1974	104,846	15.7	168,956	25.3	273,802	41.0
1974-1975	121,546	16.4	197,141	26.6	318,687	43.0
1975-1976	140,223	17.1	228,786	27.9	369,009	45.0

10 - THE CROWSNEST PASS SKIER MARKET

It is difficult to calculate objectively the proportion of the Alberta skier market which might be attracted by a ski facility in the Crowsnest Pass. With the increasing popularity of vacation skiing, out-of-province skier visits may become a more important component of total demand. It must be assumed that for the next ten years, established ski areas will undertake measures to accommodate the increase in skier demand. This is particularly valid in the case of the West Castle Moutain ski area, 30 miles to the south of the Crowsnest Pass. Only a small part of the ski potential on this mountain is now developed. Direct competition can also be expected from the ski facilities on Fernie Mountain in British Columbia, 40 miles to the west of the Pass. If snow conditions on Bluff Mountain are adequate, this mountain holds substantial promise for the increasing number of skiers looking for high quality skiing and on-site conveniences.

The method used to approximate the potential drawing power of the Bluff Mountain ski development is based on a simple gravity analysis. In the analysis, the distance from the market is the most important factor. The quality of skiing offered is a secondary factor. The effect of distance to the market is estimated by employing the equation developed by R.B. Herrington[34] in his study of skiing in the Western United States.

Examination of the site plans of the six major Alberta ski developments indicated that the present development near Lake Louise may be best compared to the Bluff Mountain potential. Calgary was selected as representative of the Alberta market as a whole. The Lake Louise ski development is 114 miles from Calgary, Bluff Mountain 160 miles.

Application of the distance to the market equation indicated that 1.91 per cent of the market population could be attracted by Lake Louise, and 1.21 per cent could be

attracted by Bluff Mountain. The ratio between the percentage is 100:63. This would indicate that a ski development in the Crowsnest Pass, comparable to the development near Lake Louise, could attract a market equal to 63 per cent of the Lake Louise attendances (or 36,870 skiers in the 1966-1967 season).

At present, the scope and quality of skiing offered on the slopes of Lake Louise is unmatched by other developments in the province. Bluff Mountain may rival this scope and quality in the near future, and through provision of ancillary facilities and amenities eventually have the edge over Lake Louise. This is not expected to take place during the forecast period. It would seem appropriate, therefore, to scale down the 63 per cent figure with a factor that indicates Bluff Mountain's physical limitations as compared to Lake Louise.

The maximum vertical rise developed for skiing on the Lake Louise slopes is 2,900 feet. The maximum that could be developed on Bluff Mountain is 2,700 feet. Multiplication of the distance from the market factors with the maximum vertical rise in each ski area (1.91 X 2.9 = 5.54 in the case of Lake Louise; 1.21 X 2.7 = 3.27 in the case of Bluff Mountain) resulted in a reduction of the 63 per cent to 60 per cent. Table 13 contains the detailed breakdown that is comparable to the breakdown worked out for the market projection for the six major Alberta ski areas. During the first operating season, (assumed to be 1969/1970) 60 per cent of the market is expected to be realized. Eighty per cent is expected during the second season, and 100 per cent beginning in the third season.

The projections arrived at by this method are approximations only. Skiing quality is measured by the vertical rise and by the quality of the equipment on the slopes, the variety and area of skiable terrain, the lodging and after-ski facilities, accessibility, public relations, management, etc. However, comparison with an established ski area like Lake Louise is considered a reasonable

basis for projections because of the potential offered by the Bluff Mountain area, and the possibility to relate the lodging and after-ski facilities to the requirements posed by the summer market demand.

TABLE 13

WEEKEND/HOLIDAY, VACATION AND WEEKDAY SKIER VISIT PROJECTION FOR BLUFF MOUNTAIN, CROWSNEST PASS, 1969-1976

		Weekend and Holiday Skier Market				Weekday Skier Market			Vacation Market
Year	Total Skier Visits	Weekend Demand (including overnight stay)	Vacation Weekend Demand	Weekend Day Demand	Total Weekend Demand	Vacation Weekday Demand	Weekday Demand	Total Weekday Demand	Total
1969-1970	30,340	12,768	1,560	8,512	22,840	3,901	3,599	7,500	5,461
1970-1971	45,280	18,520	2,458	12,346	33,240	6,145	5,810	11,956	8,603
1971-1972	62,641	24,862	3,579	16,575	45,016	8,949	8,676	17,625	12,528
1972-1973	70,132	26,979	4,208	17,986	49,173	10,523	10,439	20,959	14,728
1973-1974	77,833	28,979	4,892	19,320	53,191	12,231	12,411	24,642	17,123
1974-1975	85,712	30,863	5,632	20,535	57,030	14,082	14,600	28,682	19,714
1975-1976	94,097	32,669	6,438	21,779	60,886	16,145	17,066	33,211	22,583

NOTE: Market penetration during first operating season estimated at 60 per cent, during second season 80 per cent, and during third and following seasons 100 per cent.

REFERENCES

1 Source of 1957-1966 data: *Canada Yearbooks* (Queens Printer, Ottawa) and J. W. Thorsell, *Waterton Lakes National Park Visitor Use Survey 1966*, Part I. Recreational Research Paper No. 24, Parks Planning Division, Natural and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa.

2 Kates, Peat, Marwick and Company, *Survey and Analysis of Non-Resident Travel*. Report prepared for the Department of Industry and Development, Province of Alberta, April, 1967.

3 McDonald Research Limited, *A Study of Inter-provincial Travel in Canada*, Table 32. Report prepared for the Canadian Government Travel Bureau, Ottawa, 1966.

4 Alberta Government Travel Bureau, *1964 Travel Survey*, Plate IX. Edmonton, 1964.
Kates, Peat, Marwick and Company, *op. cit.*, Plate 24.

5 This finding would seem consistent with the findings of J. W. Thorsell in his visitor use survey of Waterton Lakes National Park. J. W. Thorsell, *op. cit.*, Page 27.

6 Kates, Peat, Marwick and Company, *op. cit.*, Plate 24.

7 McDonald Research Limited, *op. cit.*, Table 32.

8 J. W. Thorsell, *op. cit.*, Figure 4.

9 Department of Highways, Province of Alberta, *Annual Traffic Analysis Reports*, Road Counter 28, 1966.

10 The average annual daily traffic is calculated on the basis of the measurements from September 1 through May 31 (875). This would include the daily traffic in the Pass area generated for all purposes, including the recreation traffic generated by the local residents.

11 Alberta Government Travel Bureau, *op. cit.*, Plate II.

12 Kates, Peat, Marwick and Company, *op. cit.*, Plate 24.

13 See for example Plates I, V, VI, and VIII in the 1964 Travel Survey.

14 Kates, Peat, Marwick and Company, op. cit., Plates 9 and 10, and Vol. 2, Appendix F, Tables 1, 2, 3, 7 and 8.

15 J.W. Thorsell, op. cit., Figure 4.

16 Alberta Government Travel Bureau, Alberta Accommodation Visitor Survey, 1965, Pages 15 to 25.

17 Ibid., zone 1 in the Alberta Accommodation Visitor Survey.

18 J.W. Thorsell, op. cit., Pages 17, 18, 19.

19 Kates, Peat, Marwick and Company, op. cit., Plate 26.

20 J.W. Thorsell, op. cit., Page 14.

21 The approximate average number of people per room reported by hotel/motel owners during fieldwork in the Pass area.

22 J.W. Thorsell, op. cit., Page 19.

23 McDonald Research Limited, op. cit., Table 32.

24 R.B. Herrington, Skiing Trends and Opportunities in the Western United States, Page 11. U.S. Forest Service Research Paper, INT-34, 1967.

25 Ibid.

26 Ibid.

27 R.B. Herrington, op. cit., Page 47.

28 Alberta Bureau of Statistics, Department of Industry and Development, Population, Alberta 1956 and 1961, Forecast 1966, 1971, 1976, 1981. Edmonton, 1965.

29 Outdoor Recreation Resources Review Commission, op. cit., Page 6.

30 R.B. Herrington, *op. cit.*, Page 23.

31 Marshall, Macklin, Monaghan Limited, in cooperation with Sno-Engineering Inc., and J.A. Robbins, *Marmot Mountain Ski Area Feasibility Study*, para. 4.5.323, Don Mills, 1966.

32 Sno-Engineering Incorporated, *The Skier Market in Northeast North America*, Page 61, U.S. Government Printing Office, 1965.

33 *Ibid.*

34 R.B. Herrington, *op. cit.*, Page 15. $Y = 3.64 - 0.0152X$, where X is equal to the driving distance in miles. The correlation coefficient (r) is 0.72.

Alka